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ABSTRACT

Four issues of this newsletter published by Project ACTT (Activating Children Through Technology), an Early Education Program for Children with Disabilities Outreach Project on educational technology, include the following major articles: "Annual Survey of ACTT Sites Indicates Common Technology Practices" (Patricia Hutinger and others); "Disabilities Database Features Products for Macintosh"; "Does Interactive Software Impact Emergent Literacy?" (Patricia Hutinger and others); "Exploring Music and Math Concepts" (Judy Potter); "Screen Saver and So Much More" (Amy Betz); "Through Parents' Eyes: Technology Issues for Young Children" (Linda Robinson); "An Adventure in Expressive Arts: I Can Draw Too!"; "Tech Tips from the Field: Putting Technology To Work in Your Classroom" (Linda Robinson); "Planning for and Buying a Computer System for Young Children" (Carol Schneider); "Single Switch Software for IBMs"; "Affordable Printers for Classroom and Home Use" (Julie Irish); "Assistive Technology- Is Its Function Medical or Educational?"; "Packing and Moving Computer Equipment" (Carol Schneider); and "Voice Print Chip Makes Inexpensive Communication Devices Possible." Also included in each issue are numerous product reviews and announcements, editorials, suggestions for classroom activities, and a conference calendar. (DB)

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ACTTive Technology

Project ACTT, Western Illinois University, Macomb, IL 61455

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VOLUME 10, NUMBER 1 Winter 1995

Technology Happenings

Annual Survey of ACTT Sites Indicates Common Technology Practices

by Patricia Hutinger, Linda Robinson, and Carol Schneider

How often are computers and adaptive devices used in classrooms? What objectives are most commonly targeted and what skills are perceived as most enhanced through technology use? Is assistive technology commonly written into IEPs and IFSPs? What do teachers and parents see as being the benefits of computers and other assistive technologies? What equipment is common in most early childhood programs? Answers to these and other questions provide families, teachers, and administrators information about technology, its common uses, and its effectiveness.

A recent survey of ACTT sites gave us some insight into the questions. The following article summarizes the results compiled from that survey.

Frequency of Technology Use

ACTT sites indicated that an average time of 6.5 hours a week was used for technology interventions. Although time varied according to the children's disabling conditions, teachers indicated that technology is used more frequently with children who have speech and language impairments, physical impairments, and developmental delays. Staff members' expertise and their comfort with the computer are also factors contributing to the frequency of computer use. The majority of teachers said the computer is used with individual children, while others use the computer in group settings or with both groups and individuals.

Objectives Met Through Technology Intervention

Communication was the main objective for computer use (40 responses), with the focus being on Language Development. **Cognitive Development** (34 responses) was a strong second with **Social, Motor, and Basic Skill Development** almost equally placing third. Each of these categories has been further broken down as shown in the table on page 3.

ACTT promotes using the computer and software as integrated curriculum activities for children. We encourage the computer to be used for all children as a means to develop, reinforce, and enhance variety of concepts and skills. We do not encourage the use of computers for "drill and practice."

IFSP/IEP Goals

Although all responding early childhood programs use computers and adaptive devices to help children with disabilities meet developmental goals, less than half the respondents reported writing technology into the children's IFSPs or IEPs. Some of the IFSP/IEP goals teachers shared with us include the following.

The child will:

- Use the computer to develop an understanding of cause and effect.

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What Teachers and Parents Say About Technology Benefits

Teachers who responded to the Fall 1994 ACTT Outreach Survey of Replication Sites expressed their observations of the benefits of technology for the children with disabilities they serve and reported what parents had expressed to them concerning children's use of technology. Selected survey questions and responses (we don't have room to print them all!) follow.

1. How have children shown improvement as a result of assistive technology use?

Attention

- I think the increase in attention it adds to the child is the best thing I have seen. Children are fascinated with having control over the pictures and actions on the screen. It is something they, not the teacher, are guiding.
- [Children] will sit for as much as 5 minutes longer using the computer than another table top activity.
- A behavior disorder child who seldom displays an interest in learning will sit for an hour or more with the computer.
- All the children's attention spans have improved while working with the computer. While most lose interest in other activities quickly, the computer keeps them occupied from 15 to 30 minutes.

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From The Editors. . .

by Linda Robinson

Once a year our Project goes through a growing spurt. What does that mean? If you remember your growing years (mine didn't last long) you may recall some physical pain, but mainly a lot of happiness and pride in being taller than you were the year before. Well, for ACTT this occurs every Fall. We send a survey to our sites to find out what they are doing in technology and how they are progressing. Since we have trained over 80 sites, we expect a few to have discontinued using technology for various reasons, hence our pain, but the majority respond with answers that make us feel like we've grown a foot, at least with pride.

This year we have summarized our sites' responses into an article for your information and enjoyment. Since most of these sites have used technology for at least five years and represent a wide range of programs across the country, this data is unique. The information is a valuable contribution to the field of early childhood technology. Hopefully it will provide you with some data as answers to your questions. Next time you are asked by administrators, family members, and early childhood personnel to justify the use of technology for your young population, you can rely on this article for some answers.

Macomb Projects has a research project studying the effects of technology on emergent literacy skills for preschool children at local sites. Some preliminary findings from the Project are shared in an article. One exciting part of the literacy curriculum is the activities in which children develop their own software using **HyperStudio**. One of the project's curriculum activities on field trips has been adapted for this issue.

Over the past two years, two of the Projects in our office have focused on the expressive arts in the preschool curriculum. A curriculum activity from one of the Projects is included here. The other art project has included a proud announcement of its new product, **ArtSpace**, a CD-ROM which gives children the opportunity to experience activities in an art museum. The program is switch accessible so that all children can use it.

Our staff have been previewing several new software programs and have included three reviews in this issue. We've also included some good news for Apple users: companies, such as Laureate and Hartley, are reducing the price of their Apple software. So if you're stuck with the old technology at least you get a break on software. This may become a trend with other software companies also.

As you read in this issue about commercial software, the new art software and the **HyperStudio** applications for emergent literacy, you may wish you could see these exciting things rather than just read about them. Well, your wish comes true March 16th and 17th in Macomb at the ACTT VI Conference! Macomb Projects staff will present workshops both days on **HyperStudio** applications. If that topic doesn't interest you, maybe you would like to learn how to make different kinds of switches and simple devices, use **ClarisWorks**, incorporate technology into art activities, assess children's technology needs, use technology as an inclusionary tool, evaluate preschool software, use Ke:nx, integrate technology into early intervention activities or preview Macintosh software. If any of those topics interest you, then please join us, we guarantee lots of good information and ideas, networking opportunities, and a great time. See you in Macomb!

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Survey continued from page 1

- Show interest in the computer for 10 minutes daily.
- Read computer text in reading programs with at least 80% accuracy, 4 or 5 trials.
- Complete computer TouchWindow programs with at least 70% accuracy, 4 or 5 trials.
- Play with switch plate toys and the computer.
- Use a switch to activate programs.
- Use the computer as a communication device.
- Identify a picture with another child while at the computer.
- Recognize pictures and sounds of various animals.
- Use the computer to enhance communication skills during class twice a week.
- Attend to the monitor while activating a pressure switch to play a computer game.
- Insert a disk, turn the computer on, and remove the disk when the program is completed.
- Use a head switch to activate a computer program 5 times per session.
- Respond appropriately to a simple directive, using the PowerPad.
- Change the picture on the screen, using the switch or Open Apple Key.

Benefits of Technology

Teachers were asked to list some benefits technology has had for children and families, as well as themselves and their staff. Answers were positive and included the following comments.

Children benefit from computers by:

- participating in an equalized environment with non-disabled peers.
- being able to interact with each other and play games together.
- using an excellent learning tool.
- developing social skills
- receiving reinforcement for many of the early concepts introduced during the daily routine and circle time.
- having a way of accessing the world (for the child with severe physical disabilities).

Families benefit by:

- learning what technology is accessible.
- experiencing the benefits of technology at early age for their child.
- learning how to use different software and discriminate what skills their child is learning.
- becoming aware of ways to incorporate technology in their child's program.
- having an opportunity to explore the computer in a non- threatening environment.
- realizing how to use technology to facilitate communication for their child.

Staff and personnel benefit by:

- becoming more adept technology users.
- assisting in teacher training and classroom consultation.
- expanding teaching modes for basic skills.
- using a teaching tool which appeals to more senses (visual, audio, tactile) and helps reach outcomes of individual children.

According to ACTT site teachers, the computer and adaptive peripherals allow non-verbal children to participate in circle and language activities and give low-functioning children choices of activities and playmates, resulting in some independence.

Equipment and Materials Used

Even though the Macintosh is becoming more popular, the Apple II series is still prevalent in many early childhood programs. Apple IIe and IIGS computers outnumbered the Macintosh three to one in the programs. The TouchWindow, whether it is an Apple or Macintosh, seems to be the most frequently used peripheral with young children. Other popular and often-used peripherals included the PowerPad, switches, the Echo Speech Synthesizer, the Muppet Learning Keyboard, and printers.

The majority of teachers responding to the survey said they use the computer as a tool for themselves. The ACTT philosophy promotes teacher use of technology, based on the belief that if the teachers are comfortable using the computer and rely on it as a

continued on page 4

Common Objectives Met Through Technology Interventionas
Reported by ACTT Sites

Cognitive Development		**34**	**Motor Development**		**14**
Cognitive	12		Fine Motor	8	
Attention	7		Eye-hand Coordination	5	
Cause & Effect	7		Visual Motor	1	
Concept Development	3				
Other	5		**Social Development**		**17**
			Social	16	
Communication Development		**40**	Emotional Parallel Play	1	
Language Development	32				
Listening Skills	3		**Basic Skill Development**		**13**
Classifying	1				
Communication	1		**Other**		**6**
Object Identification	1		Child Goals	3	
Picture Identification	1		Games	2	
Vocabulary Development	1		Physical Access	1	

As explained on page 1, teachers responding to the survey of ACTT replication sites indicated that communication development was a common objective for technology intervention, followed closely by objectives to encourage cognitive development.

Early Childhood Software Available for IntelliKeys

Looking for IntelliKeys overlays for some of your children's favorite programs?

Brøderbund Software has a custom overlay which works with **The Backyard** and provides access to the program to those with limited physical abilities. This overlay is included with all school editions and is available for $5 to those who purchase a consumer edition. Call Brøderbund at 800/521-6263 or 415/382-4400.

RJ Cooper's **Point to Pictures**, which teaches cause and effect and allows people with severe disabilities to make selections and control their environment, works on Apple IIe, Apple IIGS, and Macintosh LC. A preboot disk allows the program to work with IntelliKeys. Call 714/240-1912.

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517/394-9899 fax

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Survey continued from page 3

tool for themselves, they will recognize the benefits of technology and the potential it has as a learning tool for children and will be more willing to integrate technology into the classroom curriculum.

Summary

The ACTT site responses to this recent ACTT survey provide the field of early childhood technology with valuable information. These sites have used technology for varying lengths of time, some of them as long as 11 years. Their observations and comments indicate that technology is seen as a valuable tool for young children with disabilties, a tool which equalizes opportunities for children and provides them with a means to achieve goals they could not otherwise achieve.

The number of children who have technology written into their IFSP/IEPs has increased over the years. Although the number continues to be relatively small, it is still impressive considering the fact that agencies and schools resist technology due to the cost.

The data shows that the main goals for using technology involve cognitive and communication skills, with social skills also emphasized. Benefits for children were reported by families and staff in these same developmental areas[1]. Many sites indicate that technology is used individually as well as in groups. The reason for the high percentage of individual computer use could correspond with the fact that language is the most frequently listed child objective. Many times a speech therapist will pull a child from the classroom for therapy, accounting for the high percent of individual computer time reported.

As far as actual equipment use, ACTT sites indicate that they still use the Apple computers, although many are updating their systems to Macintosh. The majority of sites use simple software programs such as Macomb Projects' **Master Blaster** with either switches or the TouchWindow as the predominant peripheral for children. It would seem then, as more sites move to the Macintosh, that more simple switch programs will need to be developed for this newer technology.

Despite differences in equipment, child goals and benefits, ACTT sites have proven that technology is an effective tool for young children. Computers, adaptive peripherals, and software combined with a developmentally appropriate curriculum create opportunities for children with disabilities to develop skills and achieve educational goals.

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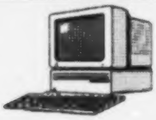
[1] It is interesting to note that many of the responses from replication sites are quite similar to the responses from Illinois site staff, children, and families participating in the modified longitudinal study of the effects of technology use over time on children with severe disabilities. The study, funded by OSERs, was recently reported by Hutinger, Hall, Johanson, Robinson, Stoneburner, and Wisslead and the results will be published by Copley Publishing in 1995. Currently in Final Report Form, published in 1994 by Macomb Projects, the study results may be obtained from Macomb Projects Office in the College of Education and Human Services at Western Illinois University in Macomb, IL.

UCLA Project Offers Instructional Guide

Computer Use for Young Special Needs Children: An Instructional Guide is a step-by-step introduction of computer technology for young children with disabilities, with developmental ages between 18 months and five years. Topics include the importance of seating/positioning, appropriate access devices, software selection, and computer related IFSP/IEP goals.

To order, send $6.00 to Kit Kehr, UCLA/LAUSD Microcomputer Project, 1000 Veteran Avenue, Room 23-10, Los Angeles, CA 90024.

A catalog of the project's software is also available. Call 310/825-4821.



Curriculum ACTTivities

Drawing on a TouchWindow[1]

Children's scribbling and mark making, lead to later recognizable images and lay the foundations for literacy and communication. Assistive technology adaptations, such as computers, adaptive peripherals, software, and adaptive grip devices, make it possible for children with moderate to severe disabilities to participate in art activities similar to those that engage their less disabled peers.

Materials:

Macintosh computer with color monitor
TouchWindow LC® (Edmark)
Kid Pix (Brøderbund)
Color printer

Ahead of Time:

Before the activity, attach the TouchWindow to the front of the computer's monitor. The monitor can be placed at the child's eye level and the keyboard can be moved aside to prevent distractions for the child. Boot **Kid Pix** and have the screen ready for the child to use.

Activity

Encourage the child to explore the TouchWindow. If necessary, model for the child how to make marks by moving your finger or the stylus across the window. You may need to physically assist a hesitant child. Allow the child to explore the options of the program (color, tools, stamps, etc.) available. Talk about the width of the line, curves, and color. Invite the children to talk about their pictures if they feel comfortable doing so. Save the image to disk. Print the pictures and display in the classroom.

Adaptations

If a child can not physically reach the TouchWindow on the monitor , remove the TouchWindow from the monitor and place it on the child's lap or wheelchair tray. The monitor can also be placed on the floor, or any other position, so that it is at the child's eye level. An adaptive grip device can be attached to the stylus or the child's hand to facilitate holding the drawing tool.

For the child who is blind or visually impaired, create a tactile overlay so the child can designated areas to select options for drawing. To create a tactile overlay, apply tactile material or puffy paint to a clear transparency. Attach this to the TouchWindow. The child is creating a picture by touch and sound. Verbally describe the process as the child touches and hears the sounds when marks are being made. **Kid Pix** provides some wonderful sound effects when drawing.

For the child who has a hearing impaairment, use sign language while modeling and demonstrating the process.

Other Activities

- Draw with crayons, markers, chalk, or paint on paper.
- Draw to music.
- Draw about a favorite story, field trip event, or key experience.
- If using an ImageWriter Printer, use a 4 color heat-transfer ribbon. With the saved picture, print using the heat-transfer ribbon and plain computer paper. Iron the transfer onto child's t-shirt .

[1] Adapted from Expressive Arts Curriculum, Macomb Projects, W.I.U., Macomb, IL.

Money-Saving Keyboard Ideas

Fred Pellerito, from the Missouri Technology Center for Special Education in Kansas City, MO, has given **ACTTive Technology** permission to print some of his great "Junk Tech" ideas. This issue features some of Fred's inexpensive ideas for modifying a keyboard.

Slip Stop, available in carpet stores or at the local Wal-Mart, can be used under the keyboard to keep it from sliding. It's less expensive than Dycem.

Shrink Plastic for winterizing windows makes a great moisture guard for the keyboard. Saran Wrap is another alternative.

Eraser Tips make great pointers and make pressing keys from a distance easier.

Stickers with pictures on them similar to the pictures in the program can be placed on the keys used to operate the program.

Shoe Box Lids can be placed over the keyboard and cut out above the keys that students need to use for a particular software program.

Stick-on Earrings that usually come in 30-pair packages for around $1.00 make great key markers for programs that require only a few keys to operate. Use different colors for different programs.

Sticker Spots in 1/2" or 3/4" self-sticking dots make great key markers that are fairly easy to remove. Use the really bright colors for students who have visual impairments. The sticker spots are made by Avery® and are found in office supply sections of your local discount stores.

Homemade Keyboard Covers can be made using part of an old 3-ring binder cover, some velcro, some foam, and a furniture tack. Remove the binder rings and cut off one of the sides of the notebook, leaving the spine and the other side for use as the keyboard cover. Place the furniture tack on the underside of the notebook so that when the notebook is pressed, the tack depresses the desired key. Attach the notebook cover spine to the top of the keyboard with velcro. Place some foam at the bottom of the binder to keep it raised off the keyboard. This homemade keyboard cover can be used as a switch with the standard keyboard.

Computer Resources Book Provides Information on Products, Funding & Services

The 1994 **Computer Resources for People with Disabilities** by the Alliance for Technology Access, with a Foreward by Stephen Hawking, contains 282 pages and 18 illustrations. The book features personal stories, information networks, product descriptions, funding sources, as well as advice about "where to go, who to ask, and what to do." **Computer Resources for People with Disabilities** can be ordered from Special Needs Project, 3463 State Street, Ste. 282, Santa Barbara, CA 93105; 800/333-6867; 805/683-6867 fax. The resource is available in paperback ($14.95), spiral bound ($19.95), and hard cover ($24.95).

Other books focusing on assistive technology are **Adaptive Technologies for Learning and Work Environments** ($35), **Funding for Assistive Technology and Related Services: An Annotated Bibliography** ($6.50), and **Living in the State of Stuck: How Technology Affects Persons with Disabilities** ($24.95 paper; $32.95 hard cover).

Report Presents Results of Assistive Technology Research

State of Practice: How Assistive Technologies Are Used in Educational Programs of Children with Multiple Disabilities by Hutinger and colleagues presents the results of a two-year study showing that assistive technology does have positive effects on children's development, even when children have significant disabilities. Fourteen case study summaries and comments from parents and teachers concerning positive effects and changes seen as a result of assistive technology, as well as challenges and barriers to assistive technology use are included. Available from Macomb Projects for $16.00

Easter Seals Catalog Offer

Making Life Better, the National Easter Seals Society's 16 page catalog, features 48 of the top suppliers of assisitve and adaptive equipment in sections geared specifically to the needs of children, people with blindness, and people with hearing and communications impairments. Sections are devoted to increased mobility, medical supply services and more.

Send a $5 check or money order to Making Life Better, National Easter Seal Society, P.O. Box 06440, Chicago, IL 60606-0440. You will receive the catalog plus a $5 gift certificate good for free copies of Easter Seals resources.

Address Change

Exceptional Children's Software
2215 Ohio
Lawrence, KS 66046

Parent, Teacher Comments **continued from page 1**

- [We use the computer] to work on attending skills of children; they remain interested in the computer for longer periods than with some toys.
- Children who exhibit attention deficits are attending for longer periods of time.
- We have seen a number of children improve appropriate attending skills.

Socialization

- Children [are] willing to take turns as they work together with the computer.
- The way we use the computer (at center time) requires use of social skills, asking for a turn. [The computer provides an] excellent opportunity because of the motivation to get a turn.
- [Children are] learning to share and take turns at the computer.
- [We see] increased interaction with other children.
- Teachers use it to teach turn-taking with groups of two children at a time.

Language/Communication/ Expression

- Some children with severe language delays have spoken their first words while at the computer.
- [We] use the Muppet Learning Keys with a CP child who has motor involvement to facilitate use of words he only used at home. Classroom staff heard the child speak for the first time.
- One child with Down syndrome initiated role playing "Katie's Farm." What a language lesson!
- The computer encourages another child to imitate words and phrases.
- [We have noticed] increased vocalizations and language skills.
- Many children with language impairments are expanding their communication with the use of software.
- [We use the computer to] strengthen receptive language skills (following directions) and expressive language skills (labeling, describing).
- One child talked more when he used the computer.
- Children will verbalize spontaneously when they are able to make things happen on the computer.
- Non-verbal students gain a means of expression.
- The computer is a good tool to use for reinforcing verbal expression.
- Children vocalize more with computer sounds.
- A hearing impaired child has begun to move rhythmically to a program that plays music while a man dances.

Attitude/Motivation

- Children are willing to participate in class activities.
- [We note] improved attitudes toward school in general.
- Children look forward to using the computers; they like them.
- [We see] greater self confidence, enthusiasm.
- Some children have been more receptive to guidance when using the computer.
- It makes the children feel good about themselves.
- Computers can be a calming influence to some hyperactive students.
- They are very eager to learn everything there is to learn and apply.
- Computer is a favorite activity for many children in the program. [It] is a great motivator.

Control over or Interaction with Environment

- Cognitively young children are beginning to interact with their environment using adaptive toys. A physically challenged child is able to use a switch device to activate a toy.
- We have seen some positive changes in children's feeling of controlling their environment and simply enjoying being able to play.
- We have found that the children who have limited movement just love the switch toys because it allows them to affect their environment, which is an important developmental skill.

Skills/Concepts

- Some children enjoy just seeing that their action (pushing the switches) will cause something to happen on the screen.

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Disabilities Database Features Products for Macintosh

The Macintosh Disability Resources (MDR) database v.3.0 includes approximately 100 commercial products for the Macintosh that enable computer access by individuals with disabilities. Each record in MDR contains a product description and developer contact information. The database includes tools for individuals with physical motor impairments, blindness, hearing and speech difficulties, and learning disabilities.

MDR is managed by Apple Computer's Worldwide Disability Solutions Group. MDR can be searched by keywords, product name, developer name, disability type, and description text.

Keywords: DISABILITY, DISABLED, SPECIAL NEEDS, BLIND, DEAF, PHYSICALLY CHALLENGED, HANDICAPPED, COMPUTER ACCESS, ASSISTIVE TECHNOLOGY, INPUT, OUTPUT, PHYSICAL, HEARING, COGNITIVE, SPEECH, VISUAL, VISION.

Internet: APPLEDSG@APPLELINK.APPLE.COM.

More information is available from Apple Computer Inc., Worldwide Disability Solutions Group, 20525 Mariani Avenue MS 2-SE, Cupertino, CA 95014.

Comments continued from page 7

- Children intentionally hit the switch [to cause something to happen].
- Cause and effect skills have improved by using the computer. They **watch** and **wait** for something to happen when they use the TouchWindow or a switch. Three children realized their drawings on the screen could be printed out; they watched to see their **own** work being printed.
- [Computer] strengthens cognitive skills: cause and effect, means/end focus on task, symbolizing.
- Concepts (over, under, etc.), (matching), (colors), (shapes), (counting and number concepts) [are improved].
- [We see] improved reading, improved math computer skills.
- Use of UCLA PowerPad software with corresponding manipulative has facilitated signing and sound/verbal approximations in children with Down syndrome.

2. What have parents reported to site staff about their child's technology use?

Enthusiasm

- Parents have usually been enthusiastic about computer use and have enjoyed coming to school to see their children use the computer.
- Parents are generally surprised to see us use a computer with young children. They like the programs and have reported that their children enjoy computer use.
- Parents report that they are glad their child is given the opportunity to work on a computer.
- A parent of a cognitively young and physically challenged child is purchasing adapted toys for use at home.
- Parents are impressed with what their children can do on the computer. It's usually hard to explain just how much young children can benefit from technology until parents can see it themselves.
- They are delighted that their kids can participate and be able to use **something!**
- One child with Down syndrome recently received a computer at home from her parents.
- Parents have bought computers because of what they have seen [work in the classroom] and decided to buy. [They are] more careful about what they choose to buy.
- Parents apply to organizations for helping fund a computer for them [at home].
- Parents are often amazed at how competent their child is at using the computer and how much enjoyment the child gets from it.
- Parents find it exciting, and use of the computer provides a comfortable environment for the non-language children.

Advantages

- Parents feel their children have a better chance to learn, because [their child] is not competing against another child while working on the computer.
- Parents are amazed that their children can access and use the computer and pleased that their children have skills they will need later in life — often skills the parents do not have.
- Most are amazed and impressed with their child's ability to use the computer; they like the idea that their child is getting to use the computer in their educational program.

Language/Communication Opportunities

- [They are pleased with] communication attempts.
- Families have commented that the computer is a good learning tool to encourage language.

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Video Explores Attitudes Toward Inclusion

EARLY CHILDHOOD LINKS, a publication of Ann G. Haggart Associates, Inc. points out that inclusion will work successfully in center-based and family home childcare only if caregivers become advocates of inclusion. The attitudes of the caregivers are the most important element of inclusion being a positive experience for all concerned.

The AGH video **It's Really No Different: Conversations with Caregivers** explores the transformation of caregivers who undertook the challenge of including children with disabilities into their programs. Through their stories, these providers explain how they overcame the "unknown" of having to care for children with disabilities and accepted these children as *children*, deserving of all the love and attention due every child. This honest portrayal provides the perfect starting point for discussion about how best to achieve the goals of inclusion.

Three major attitudes emerge as these caretakers discuss their experiences. **Fear** and reluctance were present because of their perceived lack of experience and knowledge of dealing with children with disabilities. **Acceptance** emerged once the caregivers became involved with the children and saw them as *children* with the same needs as all other children. **Confidence** came through the experiences of overcoming obstacles which led to increased care-giving skills.

The video ($65) comes with a discussion guide. More information about **It's Really No Different: Conversations with Caregivers** is available from AGH Associates, Inc., Box 130, Hampton, NH 03843.

Supporting Classroom Diversity

...but I WANT a program that depicts different cultures

by Letha Clark

In the search for software programs that contain influences from various cultures, we are often stymied. The favorite CD-ROM in many classrooms is **Just Grandma and Me**, which features a critter rather than a child. The long-popular Stickybear programs "star" bears. **Muppets on Stage™**, the program used in many classrooms with the **Muppet Learning Keys™**, characterizes the Muppet gang. And the smash hit **Thinkin' Things** is hosted by a bird and an orangutan.

No kids, no ethnic diversity, no cultural influences—hmmm...now why do you suppose that is? Maybe it is easier to "program around" ethnic diversity than to develop a program that deals with it. Maybe it is fear of not getting the "facts straight" and making a politically incorrect blunder. It would be unfair to create a program about Native Americans; each tribe is like no other, each possessing its own distinct culture. The same could be said about individuals of Asian descent. To develop a program dealing with the Asian culture does a disservice to all Asians.

No wonder we have software with talking critters (albiet they may speak in Spanish, Japanese, or English), mice, cows, kitties, dragons, moles, and horses. It is safe. Few toes get tromped on and few feelings get hurt.

If you want to address the cultural differences and ethnic diversity found in your classroom, one solution is **HyperStudio**. Use this authoring program with children in your classroom and develop your very own software. Family stories and pictures can be included in a **HyperStudio** stack that tell the real story about each child and his/her uniqueness.

Software Promotes Understanding of Simple Machines

Science for Kids has published **Adventures with OSLO: Tools & Gadgets**, software for children ages 5 to 14 which focuses on the six classes of simple machines.

The main character in this animated storybook is Dolly, a llama who gets herself in a variety of difficulties. She is always rescued by Jimmy, the hero who can transform himself into various machines.

Children may also play an adventure game and hunt for treasure in Tooltown. A coloring galley has musical coloring markers.

Call 800/572-4362 for ordering information.

IntelliTools Discontinues Unicorn Products

IntelliTools, Inc. has recently discontinued the manufacture and sale of its entire Unicorn product line. The following products are no longer available: Unicorn Expanded Keyboard, Unicorn 510 Keyboard, and all Unicorn Keyboard accessories and overlay kits.

New Address:

IntelliTools
55 Leveroni Court, Suite 9
Novato, CA 94949
800/899-6687

Product Protects Files from Loss

Do you have but one computer in your classroom that you use for yourself but also have available for the children to use? Do you share a computer with another teacher and her classroom? Have you ever worried that the children (or the other teacher!) might accidently "trash" a report, data base, or letter you have worked hard on and want to keep safe? Do you want a means to

•prevent damage of hard disk data;
•keep files from being changed, moved, lost, or deleted;
•protect files and desktops with individual passwords;
•specify which files and programs the children can access;
•group student desktops by teacher, grade level, or subject?

If so, **KidDesk** is the answer for you! With **KidDesk**, children in your classroom can operate and explore the computer to their hearts content while you remain worry-free about the safety of your programs and files that are protected by your own special password.

Personalized desktops (with six themes from Dinosaurs to Executive) allow students to launch the programs you have selected for their access. Desktops can be protected by passwords. Each desktop features interactive desk accessories: a printable calendar, a talking clock, a working calculator, and a message machine. All choices on student desktops are graphical. No reading is required.

Available for Macintosh ($49.95), MS-DOS ($49.95), and Windows ($59.95), **KidDesk** has built-in single switch scanning for students with special needs and is TouchWindow compatible. Site licenses and lab packs are available.

Contact Edmark at 800/362-2890.

Does Interactive Software Impact Emergent Literacy?

by Patricia Hutinger, Janet Bond, and Bev Clause

Clearly technology makes a positive impact on young children with disabilities in a global fashion, but now Macomb Projects staff are beginning to look at very specific aspects of technology. Most recently we focused our attention on emergent literacy, receiving funds[1] to study the effects of an Interactive Technology Literacy Curriculum (ITLC) on the emergent literacy knowledge and abilities of 3, 4, and 5 year old children who demonstrate mild to moderate disabilities. The study is qualitative in design, producing case studies of the classrooms involved, with a focus on what happens to children, families, staff, and administrative structure.

We are currently working with fifty-nine children, three teachers, and four program assistants in three different school systems. Three classrooms, categorized by their differing technology experience and ITLC use, are being studied in depth. Prior to involvement with the project, the Type I classroom did not have a computer and represents a 'new to technology' classroom. The Type II classroom teacher had used technology in her curriculum, representing a 'technology familiar' classroom. The Type III classroom teacher had also used technology in the curriculum (a 'technology familiar' classroom). Both Type I and Type II classrooms participated in the ITLC Curriculum while the Type III classroom continued using technology in the way it had been used in prior years.

The ITLC Curriculum is based on interactive commercial software, tool function software, and **HyperStudio** software produced by the participating classes. Commercial software was selected after a thorough analysis of its quality and interactivity level, as well as its appropriateness and appeal to preschool children. The software and the **HyperStudio** themes were selected to accompany the classroom teachers' curriculum themes.

The Type I classroom began the year using commercial software, including **The Backyard**, **Stone Soup**, **Harry and the Haunted House**, **Just Grandma and Me** and **Little Monster at School**. The Type II classroom was introduced to **HyperStudio**; then the children began developing their own software based on curriculum themes chosen by the teacher. The Type III classroom continued to use the software available to them without using the ITLC approach.

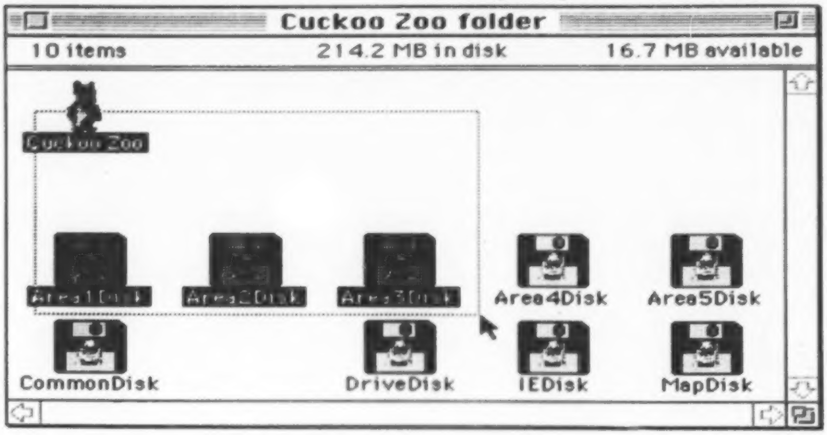
Although this is the first year of the study, which will last for three years, we are already finding interesting, but not surprising results. Children do, indeed, acquire elements of emerging literacy as they use the ITLC. A few examples follow.

Child Outcomes

Preliminary observations show that young children demonstrate increased attention as well as positive social behaviors when they are involved with aspects of the ITLC. Observations and accompanying videotapes contain many examples.

Children who have short attention spans tend to be attracted to the computer. They seem to prefer software with frequent animation and lively sound, such as **The Backyard** and **Harry and the Haunted House**. One child's response is described in the following paragraphs.

continued on page 13



Helpful Mac Tip

It's A Stretch!

by Letha Clark

Most Macintosh users are familiar with holding the shift key down while clicking on multiple items to select them. That works especially well for items that are scattered all over a window. If the items are arranged close together there is another method for selecting that is a click and a drag.

The Macintosh comes equipped with a real "stretchy" rubber band. Click the mouse button and drag the mouse to select a group of icons or items by making contact between them and the rubber band. In an open window, as you drag the mouse around or through an icon or item, it becomes part of what is selected.

To select several graphics in an open document, click and begin the drag off of an icon or object and surround all items you want to select. (See example on the left.) It won't take long to perfect this move and you'll find yourself with a "shift key" memory lapse!

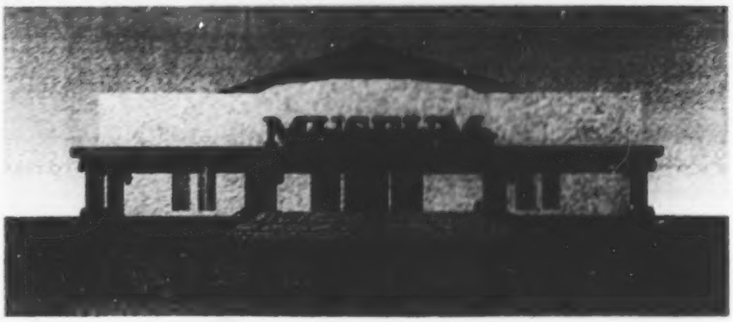
DISCOVER

ArtSpace

AN ADAPTIVE CD-ROM

An Adult Gallery, Children's Gallery* and *The Studio

NEW!
FUN!
EXCITING!



FOR
CHILDREN
3 - 8

Coming Soon!!!

Create a great start with the arts!

Fun and adventure await you on your exploration of ArtSpace, an interactive journey through an art museum. See and enjoy the collection of art created by adults and children in the *Adult Gallery,* the *Children's Gallery,* and *The Studio.* Select your favorite drawing in *The Studio,* watch as it is magically drawn with each press of a switch, TouchWindow™, or the mouse of your Macintosh computer. ArtSpace has been designed for easy access by young children with disabilities, allowing them the opportunity to be an active participant in art activities. They will enjoy recreating their favorite Studio drawing and printing it out. Fifteen different categories may be selected for QuickTrips through the galleries, or you may choose to browse at your leisure through randomly selected rooms.

Resource curriculum units for each of the 15 categories have been provided for the enrichment of your daily classroom agenda.The accompanying curriculum provides new and exciting ways to integrate art into your classes with activities which are meaningful to children. Two additional categories have been included to complement cultural awareness activities in your classroom.

ArtSpace may be purchased separately for $29.95 or with the accompanying curriculum manual for your classroom for only $49.95 plus shipping and handling from:
Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455
309/298-1634 • FAX:309/298-2305

Software Review

Math and Logic Activities Equal Learning Fun

by Carol Bell

"Magic and Math! Logic and Laughs!" announces the user manual of **Anno's Learning Games**. The software contains seven non-threatening math and logic environments that are extensions of early primary programs. From weighing objects on scales in the math center to Venn diagrams, this program will delight children ages 5-10. Two characters named Kriss and Kross lead the user through the games.

Explore and compare weights of objects in the weighing game. Various objects can be placed on a scale (clicking on a button on the screen gives more choices). The weight is shown as a bar length. Children compare lengths to determine differences in weight. When children choose the second mode, Kriss asks for an object that weighs the same as the weight line shown.

Publish a story in the storymaker. The story's main characters are chosen using a grid with characters on the top and attributes of the characters on the left side. A character obtains an attribute when a blank square in the grid is clicked. When the characters are chosen, clicking a book places the characters in a story that is read and may be printed. Choices of characters, attributes, and story settings change.

Building a puzzle with tannograms or annograms takes place in two modes. Exploration is possible after clicking a button on the screen and dragging the shapes to build a unique creation. A more challenging possibility comes into play when the child clicks on a button and places the shapes into the guidelines. When the pieces are placed correctly, the puzzle is animated.

Create a card game by choosing a deck of cards. Children can personalize a set of cards with goldfish or other characters and print the cards for a hands-on game, or they may choose to play a card game, *Sevens in a Row*. The first person to lay the cards down wins the game. It's not as easy as it sournds! The challenge? Cards must be put down in a certain order.

If the class is learning about Venn diagrams, "Guess My Rule" may be helpful. Kriss and Kross think of objects that have some similar characteristics. One object is placed in the intersection and the player sorts the others into the Venn diagram. After the objects are sorted, players get to guess the rule and test it out.

In the guessing game, children are asked to think of something; then the program "reads their minds." Questions are typed out of a machine and the player clicks on buttons marked "yes" or "no" to answer the questions. After several questions and answers, the program guesses what the child is thinking of. If the guess is not correct, the child is asked to type in what he/she is thinking of and to give a characteristic of the object that it does not share with the object guessed. For a younger player, adult guidance is needed to read the questions and to type in the responses to incorrect guesses.

Anno's Learning Games is published by Putnam New Media, 11490 Commerce Park Dr. Ste. 130, Reston, VA, 22091. The inspiration and springboard for the content of the program is **Anno's Math Games** by Mitsumasa Anno.

Classic Titles on CD-ROM for Readers and PreReaders

Compton's New Media catalog features some interesting CD-ROM titles for your classroom at affordable prices ($35 to $69). Interactive multimedia storybook titles include **Beauty and the Beast, Sleeping Beauty, The Adventures of Pinocchio, The Wind in the Willows, King Arthur's Magic Castle, Peter and the Wolf,** and **Talking Classic Tales** (which features 5 fairy tales). Prereaders and readers alike will enjoy the interactions, the animations, the colorful graphics, the music soundtracks, and the stories.

Call Compton's New Media and request a copy of their catalog containing these and many, many other titles that will appeal to both children and adults. 800/216-6116.

Reader Rabbit Software Now on CD-ROM

Reader Rabbit I and **Reader Rabbit 2** are now available in CD-ROM versions which feature digitized speech, enhanced graphics, sound effects, and more animations. Phonics skills are reinforced as all words and letter sounds are read aloud. Speech clarity helps youngsters isolate letter sounds and recognize letter patterns in words.

Self-running demos show non-readers how to play each activity. Spoken help and hints are always available. Teachers can match learning experiences to individual children's learning levels.

Reader Rabbit 1 helps children ages 3 to 6 develop pre-literacy skills. **Reader Rabbit 2**, for 7 and 8 year olds, reinforces word recognition, sounds, and word concepts. Call The Learning Co. at 800/852-2255.

Software Review

Exploring Music and Math Concepts

by Judy Potter

T/Maker's **Stradiwackius**™ The Counting Concert, a VroomBook animated book for kids, is a musical adventure CD-ROM about ten animated, 3-D musical instruments that introduce children to the world of music through over 40 interactive activities that engage and entertain children while encouraging skill development. This program has many wonderful features for involving children in exploration of music and math concepts.

Albert, Wendy, and Pablo, the bookworm friends, guide children through the program and become playmates as children explore this interactive, multimedia musical world. They challenge children to master new concepts, learn new facts, explore multiple language (French, Spanish, German, or English), and uncover their musical talents.

Albert tells facts about each instrument. By clicking on the Jack in the Box, the child activates music and math games using the instruments as counters. Randomly generated counting, sorting, addition, and music games, as well as fun surprises, will challenge and entertain children.

Wendy tells a short story about each musical instrument. The child can then click individual words and hear them. When the child clicks the instrument, a graph with musical scales appears. Children can click or drag the boxes to create music, but they cannot play it back. When a child clicks a musical note, the program plays its own music.

Pablo gives the children the choice of constructing wacky musical instruments from a variety of tools, pipes, toasters, etc. or painting a pre-drawn picture of a musical instrument. In the construction activity, each wacky tool makes a sound. When the child clicks the "jamomatic" button, the sounds are played together. Click the green musical note and hear the wacky instruments accompany the tune of "Yankee Doodle".

The paint program allows the child to color, erase, and print a pre-drawn picture of one of the ten musical instruments; but there is no option for children to create their own drawing. There is a "splat" sound when the child chooses a color, but there are no sound effects while using the paint tools.

While the program has much to offer, and the animation is beautifully rendered, the lack of choices and the colorbook aspect of the paint program is disappointing.

Stradiwackius™ is advertised for ages "Advanced 3's & up". Mac System Requirements include: 4 MB RAM, System 6.07 or higher, CD-ROM Drive, and Color Monitor. T/Maker's **Stradiwackius**™ is available for $28.99 from the MacMall Catalogue, 800/222-2808 or from the T/Maker Company, 1390 Villa Street, Mountain View, CA 94041, 415/962-0195.

ACTT Training Dates

June 5 - 9, 1995
and
July 31 - August 4, 1995

Training includes computer operations, switch construction, curriculum integration, technology applications for children ages 0-8 with mild to severe disabilities, and much MORE!

Call 309/298-1634 for information

Interactive Software continued from page 10

During the first classroom visit, one 5-year-old boy did not attend to activities for any length of time. Before the computer was brought into the classroom, the child's focus was primarily on arranging small animals on a table or using the manipulative table if there were materials available in it that could be poured. The remainder of his time was spent walking the perimeter of the classroom, waving his arms. He seldom interacted with the other children. However when the computer was introduced, he was immediately attracted to it. Documentation shows that he began to attend to a computer activity using software with high levels of interactivity for periods of time ranging from 5 minutes to 25 minutes. His reluctance to leave the computer center was also observed on several occasions.

His speech therapist is pleased with his response to the computer and software. The first time she observed him at the computer, he was surrounded by classmates. She later commented, "I can't believe the interaction he is having with the computer, the other children, and me, all at once! He never shows this, especially with other children. I need one of these set-ups for my speech room."

Observations of other young children with short attention spans indicate similar responses to the computer activities. In all cases the children's attention spans have increased, often dramatically, while they are interacting with the computer. Children who have little or no interaction with their classmates at other times **do** interact with them at the computer.

Using HyperStudio

Both observations and experiences with children who create their own software using **HyperStudio** indicate that the children show excitement and display satisfaction when creating the stacks. Initially children used a camera to take their own pictures of people and things in their classroom. These pic-

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BEST COPY AVAILABLE

Software Review

Screen Saver and So Much More

by Amy Betz

Kids World™, The First Screen Saver Construction, is an easy-to-use animated screen saver program, specifically designed for children. The program comes with backgrounds for "Backyard World," "Camp World," "Dinosaur World," "Farm World," "Haunted World," "Space World," "Wild West World." Black and white backgrounds allow children to create their own designs.

Kids World comes with a variety of stamps; some are animated, and some are not. Children drag the stamps to the desired location and click to place them. Also available is a drawing program to add unique, individual touches to the screen saver.

When the scene is complete, just click on the checkered flag, "Go" icon and watch the scene come to life — complete with sounds! The scene can be saved and the accompanying program, **Underware™** (which can be found under Goodies in the menu) can be opened to save the scene as a screen saver. Children will delight in seeing their own creations pop up on the screen!

While the purpose of the program is to make screen savers, children's language and social skills can be developed while they enjoy creating their very own scenes and stories.

The animals in the program are quite amusing, even if some of them do not do typical animal activities. Unfortunately, the people in **Kids World** do not depict cultural diversity, and the only woman in "Wild West World" walks through town saying, "Hoedeo." On a more positive note, the gun play in "Wild West World" is generally limited to shooting flowers, a flag, or water. It would also have been great to be able to change the colors of the animated items to custom make the screen saver. This is not a feature of **Kids World.**

Kids World requires a Macintosh LC or higher, with at least 4MB of RAM, and System 7 or higher. It is manufactured by Big Jugglers, Inc. 785 Castro Street, Mountain View, CA 94041. It sells for $49.95.

***Interactive Software* continued from page 13**

tures were then placed into **HyperStudio** then the children helped create stacks. Topics included the classroom from a mouse's point of view and field trips. Clearly the preschool children in both the Type I and II classrooms are capable of producing interactive software unique to their own situations using **HyperStudio**.

Children sat in front of the computer, pointing at their classmates' pictures, and exclaiming to another child (who was often clear across the room) that he or she was on the monitor. When asked to add sound to their stacks, children waited patiently for ITLC staff to create a button and bring the recorder up on the monitor. They stayed by the computer and were unconcerned about the time the process took. As soon as they were asked to tell about the picture, they picked up the microphone and waited until they were signaled (usually a touch on the shoulder, a nod, or a finger raised toward the child) to start talking.

In the beginning, children simply labeled people or items in the pictures. As time progressed we began to hear sentences. For example, when a child was creating a book, he selected his name to be used as a button. He asked that the button make a sound which he then recorded saying, "I love you, Mommy."

Similar behavior occurred when we began adding animation in the stack. A child wanted paper towels to come out of the dispenser. A button was designed to do this, but before the button was finished, the child wanted to add sound. The child and adult discussed the sounds that might be used. After the discussion, the child brought paper towels to the table, crumpled them, and recorded that noise for his stack.

While working on a stack about the five senses, one child asked where the beginning of the book was. A new card was added at the beginning and two children discussed a title to put on the card. They asked us to add a few buttons; then they smiled at each other, satisfied with the results. The first child commented, "Now I have a start to the story."

Summary

Preliminary findings based on the first six months of the study indicate that computer technology has positive effects on the emergent literacy development and social interaction of young children with mild to moderate disabilities. The children involved in this study are typically the children who fall behind in kindergarten and the primary grades. The ITLC emphasizes the children's experiences with stimulating and meaningful software (and accompanying peripherals where appropriate), as well as the ongoing development of skill in reading and writing through social interaction. The data show growth in the children's abilities while working at the computer using interactive software. Communication skills, (including vocabulary, drawings, writings and social interaction with peers and teachers) an important element in literacy, have increased across the Type I and II classrooms.

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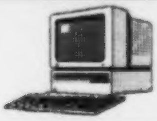
[1] The qualitative study is funded by USDE's Technology, Educational Media, and Materials for Individuals with Disabilities Program, PR#H180G40078. The study began August 1,1994 and continues until July 31, 1997.



Curriculum ACTTivities

An Interactive Field Trip[1]

Field trips are important experiences for children in an early childhood classroom. These trips may be planned around topics discussed in the classroom or around seasonal themes. The local community may have an industry or an historical feature that would be an interesting site for a field trip. Places to visit may include the YMCA, a park, library, post office, bakery, fire station, green house, bowling alley, or newspaper office. Activities and discussions about the field trip enhance language and cognitive skills in young children.

Children can retell their field trip experiences through art work, written expression, drama, and storytelling. **HyperStudio** (Roger Wagner Publishing) can then be used to incorporate the children's products into a unique story to be retold on the computer. The field trip experiences come alive on the screen as familiar pictures, people, artwork, and voices appear in the children's story. By helping develop this computer story, children develop sequencing, communication, identification, and social interaction skills as well as pride and a sense of accomplishment at seeing their own art work and story on the computer.

Capturing the children's field trip story on disk allows it to be viewed at family nights and open houses and shared with other early childhood classrooms. The children can relive their field trip during computer time. Many activities can be developed around the children's computer story. Copies of each child's story can be printed, bound into booklets and shared at home or in the reading center.

HyperStudio can be adapted with a switch, TouchWindow, or other touch tablet to provide an added means of achieving a variety of skills in an inclusive setting.

Materials:

Macintosh computer with a color monitor
HyperStudio[2] (Roger Wagner Publishing)
Microphone - compatible for the computer
Color printer
Camera and film
Color Flatbed Scanner[3] (optional)

Ahead of Time:

Schedule the field trip, transportation, and additional assistance. Obtain permission slips and gather any materials needed. Prepare activities to introduce the field trip to the classroom. For example, encourage the children to predict what they would see on the field trip. Review rules for taking field trips. Take along a camera to capture pictures of sites visited and of each child.

Activity

During circle time after the field trip, encourage the children to talk about what they saw. Ask them to talk about their favorite parts or to describe various things they saw. Reinforce sequencing, by asking questions such as, "What came first?" or "What happened next?" Such discussion and descriptions remind children of what they did and the experiences they had. Write the children's comments on large tablets.

Encourage the children to draw pictures of their field trip experience. These drawings can then be scanned and saved for future use in **HyperStudio**.

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Field Trip Curriculum Activity continued from page 15

Computer Activity

At the computer center, with each child taking turns, encourage them to draw pictures of their experiences using the drawing program in **HyperStudio**. Save each picture to disk. While some children are at the computer center drawing, encourage the other children to use color markers to draw pictures of what they saw . Ask leading questions that encourage the children's involvement: "What was your favorite part of the field trip?" or "What did it look like?" Facilitate discussion among peers about what they liked or saw.

With a facilitator at the computer using **HyperStudio** Sound Shop encourage the children to retell their experiences. Record children's voices as they describe their pictures and experiences. Save the recordings to disk.

During teacher prep time, combine the children's stacks using **HyperStudio**. If a color flatbed scanner is available, scan the children's artwork from the field trip. Save the pictures as "PICT" to disk. Place into **HyperStudio**.

Once the **HyperStudio** stack is completed, begin the day at the computer center with the **HyperStudio stack** on the computer. Encourage the children to talk about the people or objects in the pictures, see if they can guess who drew each picture or recognize each others' voices. The children can relate their story to other books or objects from the field trip.

Adaptations with input methods and overlays (such as Ke:nx) insure that every child in the classroom can participate equally in the activities.

Other Activities:

Making a Classroom Book

During the field trips, encourage the children to take photographs. When the photos are developed and printed, use them as part of a classroom book. From **HyperStudio**, print each child's story using a color printer. Laminate the pages. Spiral bind the pages and photos together to create brag books for the classroom. Individual or group books can be created. In this way, the unique stories created with **HyperStudio** allow the children to relive and share their field trip experiences with each other, families, and friends throughout the school year.

Curriculum Integration Ideas:

- Talk about the recent field trip (Who works there? What do they do? Did they have fun? How would you do things differently?)
- Allow the children to help setting up a dramatic play area with the appropriate props.
- Compose "Thank You" notes on the computer and send them.

Related Software:

KidPix (Brøderbund)

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1 Adapted from Interactive Technology Literacy Curriculum, Macomb Projects, WIU, Macomb, IL.

2 **HyperStudio** is an application that allows the teacher to develop an individualized program by creating cards containing text, pictures, and sounds. After many cards are created and combined they are called stacks. Each card can be modified with buttons. Buttons are "hot spots" on the screen. If the user were to take his mouse to a "hot spot" and click, something would happen such as sound, animation, or a move to another picture. The button allows the user to navigate through the stack of cards.

3 Knowledge of using a color scanner is recommended. A scanner is used to transfer photographs, pictures, childen's artwork, and written material onto a computer disk. Once these images or written words are in a file, they can then be placed in a graphics program or in **HyperStudio** for modification or further use.

Company Publishes HyperStudio Textbook

South-Western Publishing Co., Cincinnati, OH has recently published **HyperStudio, Quick Course**, a manual for teaching **HyperStudio**. The textbook, written by Dave Cochran and Rob Staats, is available for either Macintosh or IIGS platforms. Each book contains 16 lessons covering material that ranges from creating cards, adding sound, text, and graphics to creating animation, including video, and using scripting. Each text comes with a teacher's guide, a resource disk, and a solutions disk. The price is $29.95. Call 800/543-7972 for ordering information.

Calendar of Conferences

March 2-4, 1995: FATIC/TAM '95, sponsored by The Florida Assistive Technology Impact Conference (FATIC) and the Division of Technology and Media (TAM) of the Council for Exceptional Children, in Orlando, FL. Contact Jeffrey Fitterman, 813/872-5281.

March 9-10, 1995: Education for the Next Millennium Conference in Detroit, MI, sponsored by the Michigan Association of Computer-related technology Users in Learning Contact MACUL, P.O. Box 850628, Westland, MI 48185.

March 13-15, 1995: Midwest Education and Technology Conference in St. Louis, MO. Contact Conference Coordinator, 1460 Craig Road, St. Louis, MO 63146; 314/872-8282.

March 15-17, 1995: 24th Annual Conference of Northwest Council for Computer Education in Bellevue, WA. Contact University of Oregon, Eugene, OR 97403-1277.

March 15-18, 1995: Technology and Persons with Disabilities Conference in Los Angeles, CA. Contact CSUN, 18111 Nordhoff St., Northridge, CA 91330-8340; 818/885-2578.

March 16-17, 1995: ACTT VI Conference, sixth annual early childhood technology conference sponsored by Project ACTT, at Western Illinois University in Macomb, IL. Contact Joyce Johanson, 309/298-1634.

March 23-25, 1995: 36th Annual Conference of the California Transcribers and Educators of the Visually Handicapped in Santa Clara, CA. Contact CTEVH, 741 North Vermontvenue, Los Angeles, CA 90029-3594.

April 5-9, 1995: The Council for Exceptional Children Annual Convention in Indianapolis, IN. Contact CEC, 1920 Association Drive, Reston, VA 22091; 703/620-3660.

April 12-15, 1995: Association for Early Childhood International Conference in Washington, DC. Contact ACEI; 301/942-243 or 800/423-3563.

May 18-21, 1995: Midwest AEYC Annual Conference in Fargo, ND. Contact Roberta Schieck, NDSU, Box 5057, Fargo, ND 58105.

June 9-14, 1995: RESNA '95 RECREAbility Conference in Vancouver, Canada. Contact RESNA, Suite 1540, 1700 Moore St., Arlington, VA 22209-1903; 703/524-6686.

June 16-19, 1995: National Educational Computing Conference (NECC '95) in Baltimore, MD. Contact Doris Lidtke, 1705 East West Highway #611, Silver Spring, MD 20910.

June 17-19, 1995: Emerging Technologies Lifelong Learning in Baltimore, MD. Contact University of Oregon, 1787 Agate St., Eugene, OR 97403-1923.

July 10-14, 1995: ConnSENSE '95 in Cromwell, CT. Contact Chauncy Rucker, A. J. Pappanikou Center Technology Lab, U-64, 249 Glenbrook Road, Storrs, CT 06269; 203/486-0165.

July 30-August 1, 1995: 1995 Partnerships for Progress Conference in Washington, DC area. Contact NEC*TAS, 500 NationsBank Plaza, 137 E. Franklin St., Chapel Hill, NC 27514.

Product Converts MLK for Macintosh Use

Sunburst now has a product that allows you to convert your Muppet Learning Keys for Apple software to use on the Macintosh. The Macintosh Upgrade Kit is compatible with the Macintosh family with ADB port (2 MB) and sells for $85. Call 800/321-7511 to order.

Tucker Encourages Vocalizations, Reinforces Talking

A Macintosh version of Laureate's **TalkTime with Tucker**, a voice activated program that encourages children's vocalizations, will soon be available.

TalkTime with Tucker, now in IBM version ($125), encourages youngsters to talk for Tucker, the program's character. All they have to do is speak into the microphone and Tucker moves and talks. The programs accepts a broad range of sounds and/or speech to make Tucker come alive, rather than the precise and accurate speech input required by similar programs.

Settings for Tucker's adventures include the farm, the woods, a stage, a fantasy land, and a televison talk show. During each adventure, Tucker meets a variety of characters that do amazing things when he talks to them: a cow pours a glass of milk; a hippo dances; tadpoles turn to frogs; a unicorn flies; a chameleon keeps changing into something new.

TalkTime with Tucker encourages verbalization, reinforces talking, introduces cause and effect; encourages turn-taking; and increases auditory and visual attention.

Using the program's single switch option, nonvocal students can also enjoy Tucker's adventures.

Contact Laureate at 802/655-4755 for more information.

Hartley SUPER SAVERS available through June 30, 1995

Buy two Apple II titles and get a third Apple II title *free*!

Call 800/247-1380
to request a catalog

NARIC Databases Provide Research, Product, Resource Information

The National Rehabilitation Information Center (NARIC) is a library and information center on disability and rehabilitation funded by the National Institute on Disability and Rehabilitation Research (NIDRR). The NARIC collection includes the results of federally-funded research projects, commercially published books, journal articles, and audiovisuals, as well as pamphlets and fact sheets.

NARIC currently has more than 40,000 documents on all aspects of disability and rehabilitation including physical disabilities, mental retardation, assistive technology, psychiatric disabilities, special education, and law and public policy.

REHABDATA is a service of NARIC. A search can be done through the database to provide a user with a descriptive listing of all the documents NARIC has on a particular topic or combination of topics. A NARIC information specialist can help tailor the search to your needs. The fee is $10 for the first one hundred citations and $5 for each additional one hundred citations.

The ABLEDATA database describes thousands of assistive devices, from eating utensils to wheelchairs. A listing of fewer than 20 products is free. NARIC charges $5 for a list of up to one hundred products and $5 for each additional listing of one hundred products.

Both REHABDATA and ABLEDATA searches are available in large-print, cassette, or braille format. All are available on PC-compatible disk. Documents that are difficult to obtain elsewhere are available from NARIC for a photocopying fee of 5¢ a page. Minimum order is $5.00.

For more information, call 800/346-2742 or 301/588-9284 and ask to speak with an information specialist. Write NARIC at 8455 Colesville Road, Suite 935, Silver Spring, MD 20910-3319.

Comments continued from page 8

3. Give examples of how technology has benefited a specific child.

- We are working with R., an autistic child who has been difficult to motivate. He has been spending brief periods of time on the computer with "Creature Feature." The staff feels R. is now making better eye contact and responding well to visual cuing.
- G. has been at [our preschool center] for several years. He is a nonverbal child who is ambulatory and also has delays in motor skills. He has used a computer as a communication system at [our preschool]. Last year G. got his own computer and his own communication system at home. In September 1994, G. was successfully integrated into a regular kindergarten program. He uses a communication system and has been able to demonstrate significant developmental gains. Without technology, G. would be unable to communicate, would probably be considered mentally retarded, and would not be eligible for an inclusionary setting. Through technology, G. has been able to become very active and independent. Technology is a vital part of his life.
- W. is a 7 year old with multiple disabilities. Access to any computer or communication system was affected by the fact that he is blind and has spastic quadriplegic cerebral palsy. This meant that the first most important task was to find a good accurate switch access. This was accomplished with a wobble switch positioned beside W.'s head. Another key was to find a way to loop W. into being an active participant and communicator. So much of his life he had spend passively, due to the degree of motor and visual impairment. With training on the computer through an auditory scan as well as an auditory scan on a communication system, W. began to gain control over his environment and make significant choices in his day. He found that he could "read" single switch stories on the computer. As he became more involved with choices and independence, he became much happier. He suddenly was eager to participate at home and at school. W. now has a good communication system that he accesses using a wobble switch and an auditory scan. He also uses a computer at school through an auditory scan. W. has made immense strides in the past year. Most of these are directly related to his ability to communicate and have an impact on his environment at home and school. These gains could not have been realized without the use of technology, ranging from toys, environmental controls, computers, and communication systems.

Laureate Extends Apple IIe Software Sale

Laureate has extended its sale on Apple IIe software until May 31. **Creature Antics, Creature Capers, Creature Magic,** and **Creature Features** prices have been slashed from $65 to $32. **Creature Chorus**, once $85, is now $42. All other Laureate Apple IIe software is offered at similar (50%) reductions. Over 50 half-price programs are available. Call Laureate at 805/655-4755 for further information.

Meckley to Promote Affordable Assistive Technology and Conduct Switch Workshops at ACTT VI

Project ACTT will host its sixth annual early childhood assistive technology conference on March 16-17. The featured speaker, Patrick Meckley, is the director of the Wm. W. Fox Developmental Center in Dwight, IL. Patrick, the parent of a child with disabilities and a long-time electronics hobbyist, has long been a proponent of "affordable assistive technology."

Patrick will open ACTT VI with a keynote address and will hold make-it and take-it workshops on both afternoons of the conference.

Thursday's workshop will feature three switches: the sandwich switch, the video cassette storage box switch, and the sip/puff or air pillow switch. Prices for switch kits range from $2.00 to $20.00.

Friday's workshop focuses on the construction or modification of three switch-operated devices: an AM/FM radio, an RC 2000 remote control, and a greeting card communicator. (See page 6 of **ACTTive Technology's** Summer issue for more information about the communicator.) Kit prices range from $10.00 to $20.00.

ACTT VI will also feature Macomb Projects' own early childhood computer specialists.

Time to register for the conference is running short; however, reservations are still being accepted. Plan to join us for two days of fun, networking, and learning! Call 309/298-1634 for more information. Purchase orders may be faxed to 309/298-2305.

Free Software Catalog

MECC has recently released its 1994-1995 Educational Software Catalog containing descriptions of its many award-winning programs. MECC educational software is available for Macintosh, MS-DOS, Windows, CD-ROM and Apple II platforms.

MECC publishes two catalogs, one for home and one for school. To order either of the free catalogs of MECC software, call 800/685-6322, ext. 529 or 612/569-1529.

Would you like to join us for the ACTT VI Conference in March? There's still room for participants! Complete the registration form below .

ACTT VI Registration Form

Name ____________________

Agency ____________________

Address ____________________

City ____________________ State __________ Zip __________

Day Phone (include area code) ____________________

Registration fees include breakfasts, lunches, and sodas each day.

Regular Registration

- ____ $55 for 2 days
- ____ $35 for March 16 only
- ____ $35 for March 17 only

Parents of Young Children (0-8) with disabilities

- ____ $35 for 2 days
- ____ $20 for March 16 only
- ____ $20 for March 17 only

____ Check here if you require special accomodations. What accomodations are requested? ____________________

Your payment or purchase order must accompany your registration. We cannot accept phone registrations. Registrations and purchase orders may be faxed to 309/298-2305. Make checks payable to Macomb Projects. Send to ACTT VI Conference, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455. Call 309/298-1634 and ask for Joyce if you have questions.

ACTTive Technology Subscription Form

Name ______________________________

Agency ______________________________

Street Address ______________________________

City ____________________ **State** __________ **Zip** __________

For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
Orders from outside the U.S. must be paid for in U.S. funds drawn from U.S. banks.

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VOLUME 10, NUMBER 2 Spring 1995

Through Parents' Eyes: Technology Issues for Young Children

by Linda Robinson

"Hearing that my child will 'never do anything' was the biggest challenge of my life."

This statement by Jane Woerly expresses the determination of the parents who participated on the parents' panel at the recent ACTT VI conference. Conference participants had the pleasure of hearing four parents speak about their children and issues related to using technology at home and school.

Other speakers on the panel were Lisa Bantle, Cathy Hahn, and Tracey Hunt. Their children, ranging in age from 4 years to 11 years, exhibit a variety of disabilities, although each one has unique abilities.

All four families have some common experiences when it comes to technology. The topics addressed by the panel included present curriculum applications, IEP writing, benefits, obstacles and future goals.

During the discussion it was obvious that all of these parents were meeting the challenge of helping their children achieve their full potentials. Technology may be one small way to meet some of those challenges.

Each panel member discussed specific technology applications currently being used by their child. Lisa's daughter, Erika, uses the Macintosh computer for writing assignments in 3rd grade. Erika wanted the other children to be able to read what she was writing. She did not feel her own handwriting was acceptable. So the computer gives her a product that she can be proud of.

Cathy's son, Jeff, uses a portable communication device, the Speakeasy, to communicate with others. He recently took his device to Hardee's to order what he wanted to eat. Seven-year-old Jeff has an opportunity to interact with his environment and all of the children at school through this technology. Jane's son, Adam, uses a Macintosh computer in kindergarten to help with academic skills and to prepare him for later applications in writing. Jane also spoke of the role Adam's motorized wheelchair has played in promoting his socialization and independence.

> *"Hearing that my child will 'never do anything' was the biggest challenge of my life."*

Tracey's four sons, Shawn, Troy, Joshua and Kip, use a variety of technology, including TouchTalker, Liberators, and computers, at home and school. Troy uses his TouchTalker to communicate with teachers and classmates, and, as his mother says, "negotiate social situations." All of her children use technology for literacy skills. The augmentative communication devices are programmed with words which describe summer camp and other events. When combined with a picture album, these devices enable each boy to talk to others about these special days. Technology also helps Joshua learn sight words. His disability makes rote learning particularly effective. Technology has provided a way for him to independently hear the printed word spoken which has helped increase his reading skills and concept development.

When the parents were asked to discuss the specific benefits of technology for their children, there was some uniqueness, as well as similarities. Common benefits included independence, equal participation with peers, increased communication, and greater sense of self-esteem. Other benefits included being able to process steps in learning, increased academic skills and concept development, and decreased behavior problems.

Technology is written into some of the children's IEPs with writing skill objectives given as examples. All of the parents discussed the importance of getting technology written into the IEP and each one expressed plans for doing so in the near future.

Audiences are always interested in ways to overcome the many obstacles to using technology. Panel members identified obstacles they encountered, but time did not permit discussion of possible solutions. Common obstacles

continued on page 3

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From The Editors. . .

by Linda Robinson

Just as we had anticipated, ACTT VI was bigger and better than ever! To our delight, participants had many favorable reviews. "This conference served as an excellent intro to the computer for me." "...demonstrated the latest trends/tools in assistive technology; gave practical ideas for teaching; showed us that using computers is not so scary!"

These comments indicate to us that we met our conference objectives, which were to provide updated information and curriculum ideas and to present assistive technology as a non-threatening tool for families and early childhood staff.

If you weren't able to attend the conference, you missed a wonderful keynote speech by Patrick Meckley. He demonstrated several low tech, low cost devices which captured everyone's interest and curiousity. See page 12 for information on his workshops if you're interested in holding a switch construction workshop at your site. He's Illinois' Mr. Switchman, but he's willing to travel to other states for workshops and conferences.

When Patrick opened the first day of the conference, we knew he would be a hard act to follow. However, the challenge was met by four wonderful parents from our area who were willing to share their children's technology stories during the opening session of the second day.

Hearing technology issues presented from a parent's perspective gave us all new insights into the true benefits, obstacles and daily applications of computers and augmentative communication devices. The combination of photographs, slides, videotapes, and the mothers' words presented a loving picture of each child that touched many hearts that morning.

If you missed ACTT VI, you also missed the Fripple Shop set up as a dramatic play activity. Staff constructed a shop just like the one in the program, **Thinkin' Things**. It was even "handicapped accessible" with switches and a doorway wide enough for a wheelchair. If you saw the shop and would like to make one for your classroom, we've included instructions on making the shop and ideas for incorporating Fripples activities into your curriculum (see page 5). We haven't met a child or adult yet who doesn't like the Fripples. They have universal appeal, probably because they can be anything you want them to be. The possibilities with Fripples seem endless!

Our Fripples activities are adaptable so that all children can participate. This is true of all of the curriculum activities and materials we develop at Macomb Projects. During the past two years, we have taken a specific interest in adapting software for expressive arts activities. One of the products of these efforts is the **Simple Drawing** set-ups that we have designed for switch or Key Largo use with **Kid Pix**. We wanted to find a way that preschool children, who are unable to use mouse or TouchWindow input, could use **Kid Pix**. The resulting Ke:nx set-ups are described in an article on page 9. In addition to adapting commercial software, one of our Projects has developed **ArtSpace**, an interactive CD-ROM, which provides art experiences for children of all ages. Read all about **ArtSpace** on page 11.

A final thought - since Spring is a time of renewal and fresh starts, why not get some new technology ideas? Take advantage of the training or workshops offered in your state or take a trip to Macomb this summer. You and your children deserve it!

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School or Parent? Who's Responsible for A Family-Owned Device?

The U.S. Department of Education, Office of Special Education Programs (OSEP), recently responded to a question about the school district's responsibility for an assistive technology device that is purchased by the parents but used to implement the IEP, and whether states could require school districts to assume that responsibility.

In a memo dated August 9, 1994, Thomas Hehir, OSEP Director, stated, "...under Federal law, the general rule is that the school district is responsible for providing assistive technology devices that are a part of the child's special education, related services, or supplementary aids and services, and that those devices and/or services must be provided at no cost to parents. Federal law, however, does not specify the responsibiltiy of a public agency in the situation described in your inquiries, where parents elect to purchase a needed device from their own funds, and the public agency, with parental permission, uses the family-owned devices in the IEP. In many cases, it may be reasonable for public agencies to assume liability for family-owned devices used to implement a child's IEP either at school or at home, since the public agency is responsible for providing assistive technology devices and services that are necessary parts of the child's special education, related services, or supplementary aids and services, as specified in the child's IEP. Further, without the use of the family-owned device specified in the IEP, the public agency would be required both to provide and maintain a needed device. On the other hand, there may be situations in which assuming liability for a family-owned device would create a greater responsibility for the public agency than the responsibility that exists under Federal law." In that case, it might be more reasonable for the school district to provide a substitute device.

In summary, "it is reasonable for states to require school districts to assume liability for an assistive technology device that is family-owned, but used to implement a child's IEP."

*—Reprinted from **The Monitor**, Volume II, No. 7, March 1995, pages 3-4. **The Monitor** is part of the MPS Technology Access Project and the Wisconsin Assistive Technology Initiative.*

$ Back for Software

Looking for savings on software? Check out Mindplay's trade-in offer:

From now through December 31, trade in any of Mindplay's Apple II software and receive $10 credit toward any of Mindplay's titles for the Macintosh. Call 800/221-7911 for more details about this offer.

Through Parents' Eyes **continued from page 1**

included funding for equipment for home or school, accessibility of equipment, and lack of training by school staff. The bulkiness of the communication devices was another obstacle mentioned by one mother.

As a final note, the parents spoke of the role which technology will play in their children's futures. For Erika, the computer will continue to provide her with a means of independence and something she can be proud of. For Jeff, the technology will continue to provide a means of interaction with others and a way to explore opportunities. Since Adam wants to be a doctor, technology will be an important tool for his written communication. For Shawn, Troy, Joshua, and Kip , technology is the key to written and social skills and a tool for learning and leisure.

All of these parents have met the challenge of helping their children achieve their highest potential. The road ahead of them may be long, but their commitment to technology will ensure that the path is as smooth as possible for their children.

Suggestions for Monitors

Fred Pellerito,on the staff of the Missouri Technology Center for Special Education in Kansas City, MO, has given **ACTTive Technology** permission to print some of his "Junk Tech" ideas. This issue features some of Fred's tips for monitors.

Sheet Magnifer: Rogers (Item #04135) makes a sheet magnifer for about a dollar that can be used to help magnify the monitor screen. They are available in many local "dollar" stores or office supply stores.

Close View™: Macintosh computers have a program (found on the System disks that came with your machine) that allows the user to magnify the screen from 2 to 16 times its normal size.

TV swivels: TV swivels are not only inexpensive but also are easy-to-use devices that are good for adjusting the the monitor's position when you set up the computer for individuals with varying needs.

Monitor position: Monitors are fairly durable and will operate either in an upright position or laying on their side on the floor. Consider the comfort and abilities of the individual when you are selecting an appropriate placement of the monitor.

Resources for Early Learning Software

Seasame Street Series
ABC/EA Home Software
800/245-4525

Kidstory Series
Active Imagination
818/735-7578

Early Childhood Connections
Apple Computer, Inc.
800/800-APPLE

Early Language Connections
Apple Computer, Inc.
800/800-APPLE

Language Arts
Baker & Taylor
805/522-9800

Amazing Animation
Claris Corporation
800/3-CLARIS

Zoo-Opolis!
Compton's New Media
619/929-2500

Ozzie's World
Digital Impace
800/775-4232

National Geographic Series
Discis
800/567-4321

Imagination Express
Edmark
800/362-2890

CHILD-WARE
EduStar America
800/952-3041

If You Give A Mouse A Cookie
HarperCollins Interactive
800/424-6234

Golden Book Encyclopedia
Hartley Courseware
800/247-1380

K-8 Library
Heartsoft Software
800/285-3475

Peter's Adventure Series
IMSI
415/454-7101

What is a Bellybutton?
IVI Publishing
800/432-1332

Undersea Adventure
Knowledge Adventure
818/542-4200

McGee Series
Lawrence Publications
800/421-4157

Magic Bear's Masterpieces
Legacy Software
800/532-7692

Sing an American Story
MediAlive
408/752-8500

Explorapedia
Microsoft
206/882-8080

Jo-Jo's Reading Series
Mindplay
800/221-7911

Mario's Time Machine
Mindscape
415/883-3000

Preschool Parade
Nordic Software
402/488-5086

The Crayon Factory
Philops Interactive Media
800/340-7888

The Cat Came Back
Sanctuary Woods
415/578-6340

Adventures with OSLO
Science for Kids
910/945-9000

Alistair and the Alien Invasion
Simon & Schuster Interactive
212/698-7000

Zurk's Learning Safari
Soleil Software
415/494-0114

Zurk's Rainforest Lab
Soleil Software
415/494-0114

Safety Scavenger Hunt
StarPress Multimedia
800/782-7944

Why Do We Have To?
StarPress Multimedia
800/782-7944

Reader Rabbit series
The Learning Company
800/852-2255

Body Park
Virtual Entertainment
617/449-7567

EarthCare Interactive
Wayzata Technology
800/735-7321

Laureate Offers Parents 50% Savings on Software

Laureate Learning Systems is offering a great summer software sale to parents. All Laureate Software is 50% off if it is ordered by August 31. This offer applies only to individuals. No schools or agencies are eligible and no purchase orders will be accepted.

Product satisfaction is guaranteed. Laureate says, "If a program doesn't meet an individual's needs, we'll take it back … no questions asked."

Call 800/562-6801 for a free catalog.

Congratulations to **ANN HEARN**, winner of the 1995 ACTT VI Conference drawing. Ann chose the **Technology Team Assessment Process Manual** as her prize.

Curriculum ACTTivities

*Edmark's **Thinkin' Things** contains a Fripple Shop activity that encourages development of color recognition, visual scanning, visual discrimination of attributes, and conceptual relationships of "and," "or," and "not." The Spring 1994 issue of ACTTive Technology contained four articles about Fripples (see pages 10-13: "Time Now for Some Fripple Fun!" "Creating a Ke:nx Setup for Fripples," "Bonding with Fripples," "Frolicking Fun with the Fripples," and " Sing Along with Fripples"). If the children in your classroom really love the Fripples, here are more suggestions for integrating this computer program and its charming characters into other areas of your classroom.*

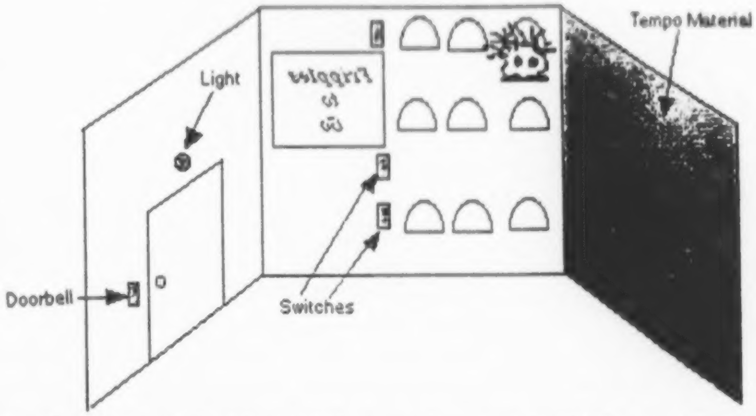
The Fripple Shop: Related Computer Activities

Ahead of time:

1. Create a Fripple Shop using a large cardboard refrigerator box. Cut out a door way and window and make shelves for the Fipples to sit on. Place a "Fripples To Go" sign in the window. Attach several switches to the front of the cardboard and run the wires to the back. Attach these switches to a battery interrupter and cassette player. Tape descriptions of the various Fripples you'll create to put on the shop shelves. ("Find a Fripple with purple spots and yellow hair.") Later, record descriptions of the Fripples children make. Gather props such as a telephone and cash register to add to the store.

Materials Needed

Refrigerator Box
Paint/Paint Brushes
Tempo Material (optional)
Switches
Chime and Light Box
Electrical Duct Tape
Staple Gun/Staples
Thin Wood Lathes (support)
Velcro
Homemade Fripples/Puppets



2. Create Fripples using paper lunch sacks stuffed with wadded paper, tissue, or shredded paper. Paint and decorate each Fripple. Use different colors and designs. Give some Fripples similar attributes so children can later compare and contrast the Fripples. Place the Fripples in a cardboard box and cover it. Put a sign on the outside that says "Fripples." Be sure there are more Fripples in the box than children in the class to insure that everyone gets a choice.
3. Prepare key questions to help keep the children on track and to keep the conversation running smoothly. During the activity, questioning should be spontaneous and related to the children's expressed ideas.

Prepare the activity :

1. Set up the cardboard shop without the props during free-choice time allowing time for the children's natural curiosity to prompt their questions and answers and engage their imaginations to talk about what it is and how "we" could use it. An ideal time to initiate discussion among the children may be during the shop set-up time. It should be a child-initiated discussion rather than teacher-directed. Make a mental note of any useful ideas for future curriculum activities, ensuring a basis in the children's interests.
2. Place a "Fripples To Go" sign in the window, read the sign to the children, and question what kind of a place it might be or what might a Fripple be. These questions will lead them to the idea of it being a shop or store. Initiate a discussion of what a shop is. Compare it to a store if the children do not mention it first and have them describe and name familiar stores. This provides practice in describing details and could be recorded on tape at a later time.

continued on page 6

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Fripple Shop Curriculum Activity continued from page 5

Questioning:

1. Act as a guide, assisting and encouraging the children to 1)express their own opinions and ideas, 2) think about and answer each others' questions as much as possible, 3) elaborate on each others' ideas.
2. Question to elicit that a Fripple shop/store is where 1) there is something for sale ,2) people go to buy something, 3) someone works to sell a Fripple, and 4) all kinds of people can buy Fripples.

Activity:

1. Gather in front of the shop with everyone sitting on the floor. (Hopefully after the discussion the children will direct the activity.) Ask if anyone recalls what the sign said or read it to the group. Ask the children what they think would be for sale in a Fripple Shop and if anyone knows what a Fripple is.
2. Introduce the box labeled "Fripples." Point to and read the label, commenting that we could probably learn more about what a Fripple is if we look in the box labeled "Fripples".
3. Pass the basket around and instruct each child to pick one. Allow them time to look at their Fripple and compare it with others.
4. Ask one of the children to describe his/her Fripple, prompting the child by questioning if needed. Ask a question or follow up on the child's comment about the Fripple to determine the attribute for the others to look for in their Fripples. ("That's right, Mindy, your Fripple has yellow hair.") Ask the child if he/she would like to put his Fripple on one of shop shelves.
5. Ask if anyone else has a Fripple with that same attribute and pick one of the children to bring their Fripple to the shop and put it next to the other one. Reinforce the idea of grouping, saying "Both of these Fripples have..." Ask the child to further describe the Fripple, and in some way determine the attribute for the next choice. Continue in this manner until all the children have had the opportunity to place a Fripple on a shop shelf and give a brief description.

Questions should vary appropriately with the developmental level of each individual child to insure success. If needed, the child could be encouraged to only repeat a description given by the adult. The questions might also be selected for assessing various skills, such as comparing and contrasting.

Other activities:

1. Computer: Introduce children to the "Fripple Shop" software program. Demonstrate the program briefly; then let the children explore all the Fripple Shop options. Encourage the children to take turns at the computer.
2. Art: The children may enjoy making their own Fripples. Have the materials (paper sacks, paper or tissue for stuffing, paint, cotton balls, yarn, and other similar items) set out on the table for them. Collage materials, glue and tempera paint offer a variety of textures for tactile stimulation, and bright colors and patterns offer visual stimulation. Such materials appeal to the senses of both hearing and smell as the children manipulate them to create their own unique Fripples.
3. Dramatic play: Leave the cardboard Fripple Shop set up in the classroom as a dramatic play area so children can play Fripple Shop using their own Fripples, as well as the ones you created. Provide props, such as a telephone, cash register, and other items similar to the ones seen in the "Fripple Shop" software program.
4. Music: Sing "Fripple Songs," such as "This Old Fripple," created by Macomb Projects staff member Amy Betz to the tune of "This Old Man." Create your own Fripple versions of children's favorite tunes, adding hand or body motions so children can "really get into" the song.

This Old Fripple

This old Fripple - it has spots
It wears its hair tied up in knots
With a great big jump, it hops down to the floor
And rolls itself right out the door.

TASH Provides Pointers for Selecting the Right Switch

The latest TASH, Inc. catalog is colorful, clever, and informative. Not only does it contain cute character graphics but, interspersed among the product pictures and description, it also contains interesting information to help customers select the right product. The pointers on selecting a switch are but one example of the helpful information scattered throughout the catalog.

Reprinted with permission from the friendly folks at TASH, are the following hints on switch selection:

How To Pick A Switch

It is important to consider the following questions when choosing a switch:

1. What actions can the person who will use the switch reliably perform? Activating the switch should not cause a person undue fatigue or pain, or compromise good muscle tone.

2. Which part of the body will give the person the best control over switch activation?

3. How much force can the person consistently exert when hitting a switch? This will determine how sensitive the switch needs to be.

4. Does the person have good targeting ability? If not, you must choose a switch with a larger surface area.

5. What is the person's range of motion? People with fine motor skills and a small range of motion must use a switch which is activated after a short "travel." Travel is the distance a person must press on a switch before it is activated.

6. Will the person use a lot of force when hitting the switch? If so, the switch will need to be very durable. Most desirable is a switch that will soften the impact between the switch and the body part.

7. Does the person have perceptual difficulties? If so, feedback from the switch that has been activated will be beneficial. You can feel tactile feedback and hear auditory feedback!

8. Finally, where will the person be using the switch? This will determine how the switch should be mounted in order to facilitate its use. The switch should not be positioned too far away so that it is inconvenient to reach, nor should it be too close so that it interferes with other activities.

Kid Pix Contributes to Success of Desktop Publishing Program

The Amazing Writing Machine, for children ages 6 - 12, takes **Kid Pix** one step further to create a complete desktop publishing program. More than 100 templates are available for children to lay out stories or poetry. Then they can use the **Kid Pix** painting tools and stamps to decorate their work.

Call Brøderbund for information. 800/521-6263.

Discontinued, Hard-to-Find Computer Products Now No Problem

Computer Marketing Corporation in Nashville, TN, offers a complete line of Macintosh and Apple IIe computer cables, cards, connectors, and accessories. Many discontinued and hard-to-find items are available.

The company is a national center for closed-out, used, refurbished, and traded-in computer accessories and peripherals. Call 800/416-6338 for more information.

Single Message Digitized Voice Communication System from AbleNet

BIGmack™, AbleNet's single message, digitized voice communication aid, is 5 inches across the top and 2.25 inches at its tallest point. Made of the same high-impact plastic casing as AbleNet's famous Big Red Switch, the BIGmack can be ordered in red, yellow, green, or blue. One 9-volt battery is required and will allow the user to play back about 700 20-second messages.

BIGmack has threaded inserts and can be mounted almost anywhere. Sensitive to 3 ounces of pressure across its entire surface, the BIGmack is activated by pressing its surface or by pressing a switch attached to its external switch jack. One activation plays an entire message. Continual pressure will not trigger a repetition.

Programming the BIGmack is easy. Simply press the record button and the top of the BIGmack while speaking into the built-in microphone. Release and the BIGmack is ready to use. The volume can be adjusted to suit the surroundings; however, if the environment is quite noisy, connect the BIGmack to external speakers.

The price of the BIGmack is $80, which includes shipping and handling. Contact AbleNet for more information. 800/322-0956 or 612/379-0956

The Arts in Early Childhood:
A Springboard for Learning

*

one hour videotape
featuring Macomb Projects'
Expressive Arts Project

*

Now available from Project
APPLES, R*TAS Regions I &III
Call 800/227-7537 for details

Project Resource Guides for Young Children, Technology, Disabilities

UCLA/LAUSD Microcomputer Project Resource Guide ($7.00) provides information about hardware, software, adaptive devices and resources for children ages 18 months to 5 years with disabilities. Updated annually, the guide includes prices, phone numbers, contact persons, addresses, and magazines.

Computer Use for Young Special Needs Children: An Instructional Guide ($6.00) offers a step-by-step introduction of computer technology for young children with disabilities, with developmental ages between 18 months and 5 years. Topics include importance of seating/positioning, appropriate access devices, software selection, and computer related IFSP/IEP goals.

Prices for each guide include postage and handling. Send a check or money order to Kit Kehr, UCLA/LAUSD Microcomputer Project, 1000 Veteran Avenue, Rm. 23-10, Los Angeles, CA 90024.

ACTT Training

The final ACTT Training session for 1995 will be held **July 31 - August 4, 1995** at Western Illinois University in Macomb, IL

Training includes computer operations, switch construction, curriculum integration, technology applications for children ages 0-8 with mild to severe disabilities, and much MORE!

Call Linda Robinson at 309/298-1634 for information

Building Blocks Software Enhances Skill Development

Blocks in Motion, software from Don Johnston Incorporated, makes drawing, creating, and animating easy for all students because fine motor skills are not necessary for success. This unique art and motion program gives children opportunities to create pictures using shapes and colors and then to make their pictures come alive with easy animation.

Children of all ages can use the program because of its variety of features and levels. Basic block shapes and wooden blocks are included in the original **Blocks in Motion** set. Basic blocks include the usual building block shapes plus some basic people and fun shapes. Wooden blocks include the usual building block shapes and some different shapes, all with a wood grain texture.

Blocks in Motion can change as children's needs and skills change. There are five additional kits that can be added. Each kit has its own blocks, backgrounds, sounds, and motion. Kits include Letter & Number Blocks, Toy Blocks, Matchstick Blocks, Cool Blocks, and Castle Blocks.

Developed by a Swiss team of teachers, educators, and engineers following the Piagetian concepts for motor-sensory development, **Blocks in Motion** was designed to develop a variety of skills: creative thinking, manipulation, cause and effect, problem solving, figure ground discrimination, spatial relations, analytical thinking, and representational play. The basic set costs $79.00.

The program requires a Macintosh, System 7, 3MB on the hard drive and 2 MB RAM, and a 256-color monitor. It can be accessed using a TouchWindow or Ke:nx and Ke:nx On:Board.

Contact Don Johnston Incorporated at 800/999-4660 for more information.

Language Learning Focus of Apple Videotapes

Apple videotape **Making Connections: Reading Through Technology** highlights schools where technology has been successfully integrated into early language learning. The tape is 9 minutes long. **Imagine-Multimedia in Language and Literacy**, a 60-minute tape, illustrates how Macintosh helps people learn to read, write, and communicate using demonstrations of collaborataive writing, bilingual, and ESL education, adult literacy programs, early language education, and foreign language study at six schools and colleges.

These and other VHS videotapes are available through Apple's Video Program and sell for $8.00 each plus shipping and handling. All orders must be paid by credit card. Call 800/825-2145 or fax 303/297-2258.

A+America Trades Technology For Proofs of Purchase

Raise money for technology (IBM or Macintosh computers, software, VCRs, fax machines) at your children's school by collecting A+Points.

The A+America catalog features more than 5,000 products offered by participating corporate sponsors. Point values are assigned to each product, and all families have to do when they purchase the products is give the proofs of purchase to their schools.

Enrollment is open to any public or private K-12 school. Call A+America for more information. 800/557-2466.

An Adventure in Expressive Arts: I Can Draw Too!

Art can be the vehicle for expression and learning for all children. The expressive arts, which includes art, music, dance and dramatics, offer opportunities for communication, problem solving, and social skill development. The arts can do so much for so many for so little! With a few markers, crayons, and some paper children make the initial marks and scribbles which begin their journey from simple scribbles to representational drawing, emergent writing, and eventual understanding of the symbols of our language. With clay or play dough they create sculptures and discover relationships between objects, and differences in materials, sizes, shapes, and forms. Children develop fine and gross motor skills as they engage in the physical activities of putting marks on papers, rolling out clay or playdough, squeezing glue from bottles, and placing objects on paper to form collages.

But how do we include those children who cannot physically particpate in these activities because they cannot use their hands to make marks or manipulate playdough?

During the past three years the Expressive Arts Project, one of our Macomb Projects, has developed adaptations and curriculum activities to insure equal opportunities for participation in the expressive arts for all children. With assistance from Project ACTT, technology has become one of the children's art tools. Staff have developed activities around **Kid Pix** (Broderbund), a popular drawing program for the Macintosh. Preschool children who use mouse or TouchWindow input have fun creating and printing images with the program. Our Projects' staff have observed children using **Kid Pix** for long periods of time either individually or in small groups. We are always amazed at the amount of concentration and determination the children have as they create colorful pictures.

As they use **Kid Pix** to draw, children are presented with many small boxes on the screen which represent available options in drawing tools and colors. Fine motor skills and concentration are required to move the mouse or to aim their finger at the desired box on the TouchWindow to select one of the options. Because such skills are often difficult for children with no disabilities, we were faced with a challenge: What could we do to provide access to this popular children's drawing program to children with physical disabilities?

Our Projects found the answer in an adaptation to **Kid Pix** which insures that all children, even those with physical disabilities, will have an opportunity to enjoy drawing. Through Ke:nx®, an adaptive interface for the Macintosh, the **Kid Pix** was customized for switch and touch tablet (Key Largo or Unicorn Expanded Keyboard) use.

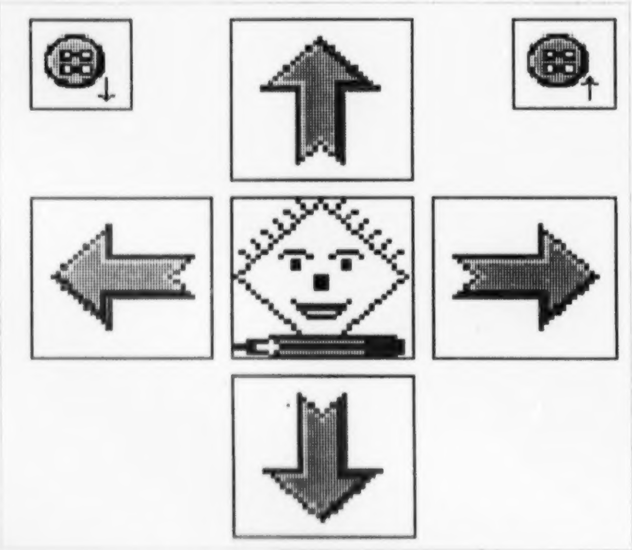
We realized simple set-ups were needed, since the ready-made set-ups for **Kid Pix**, which are available on the Ke:nx software and as Easy Overlays from Don Johnston, are designed for older children, not for preschool applications. Therefore, we developed **Simple Drawing**, four Ke:nx setups designed to be used with **Kid Pix.** If young children need to use a switch or touch tablet and are beyond simple switch activation, these setups provide a means for them to create images.

Switch Set-ups

Two switch set-ups were designed for young children who have the ability to use a simple scan, or who are developing scanning skills. The first setup (shown below) provides the child with 7 choices; button down, up, button up, left, click, right, and down. The child is encouraged to activate the switch to start the scan, then activate his switch to make a selection. The scanning be-

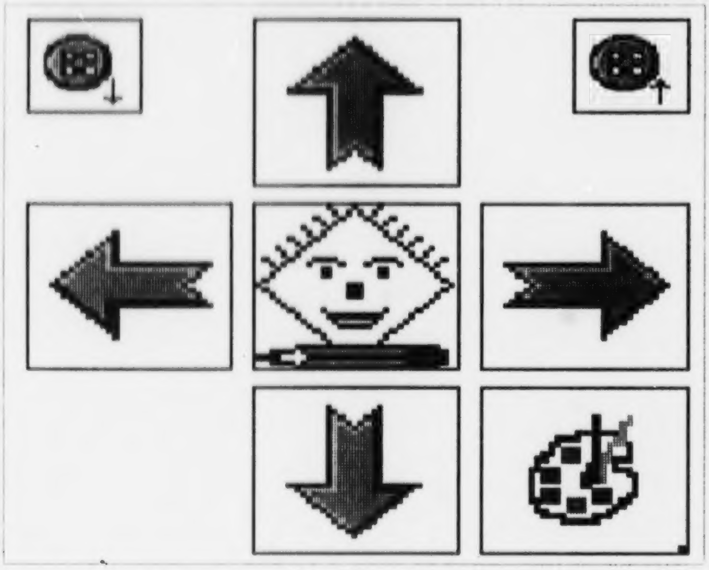
continued on page 10

Switch Setup #1

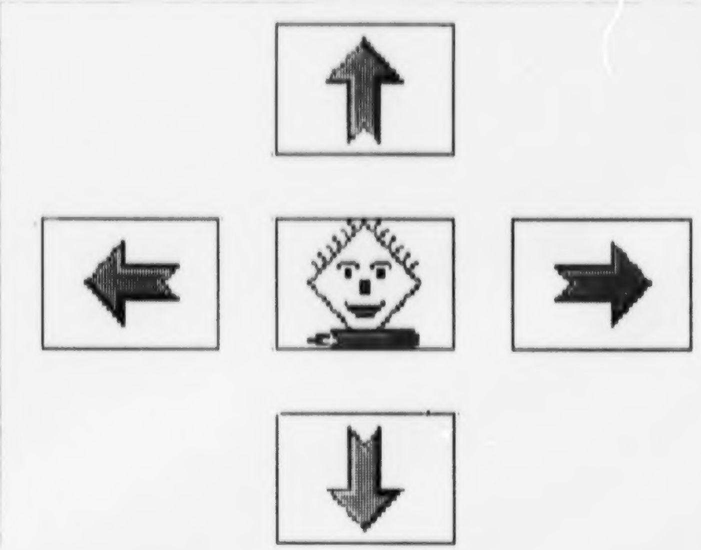


An Adventure in Art continued from page 9

Switch Setup #2



TouchTablet Setup #1



gins at the top, moves to the left, down to the right and moves to the left, etc. If the child activates the up arrow, the cursor will move up until the child hits the switch to stop the movement. The **Kid Pix** icon is the mouse click, which will release the cursor. When the child activates the button down, the cursor will draw with the default color (black). The child then selects an icon to move the cursor on his drawing.

In the second set-up the child is presented with an eighth choice, the color palette, to change the color of the cursor. When the palette is selected, it will branch to a new array. The child can then select the colors red, blue, or yellow. The seven other choices are the same as the first set-up. The illustration to the right depicts the scanning options presented in this second switch set-up.

Touch Tablet Input

For children who can use a touch tablet, such as the Key Largo or Unicorn Expanded Keyboard, **Simple Drawing** offers two set-ups for overlays which simplify the options in **Kid Pix**.

The first touch tablet overlay provides the child with 5 choices; up, down, right, left, and click. The setup simplifies the drawing program by reducing the number of choices for a child to activate in order to make a mark on the screen. Each icon replaces the mouse movement or click. For example, when the up arrow icon is selected, the cursor will move up with the default color. It will keep moving up until the child activates the up arrow again or selects another icon. To stop the movement of the cursor at any time, the child can activate any icon on the overlay. Selecting the "click" icon will release the cursor so the faciltator can select other options for the child, such as color, if needed. The illustration above, **Touch Tablet #1**,depicts the overlay which can be printed and placed on the touch tablet for use with this setup.

The second touch tablet set-up, illustrated on page 11, provides the child with 6 choices; up, down, right, left, click, and a palette. When the palette icon is selected, the cursor moves to the color palette of Kid Pix and scans the colors, red, blue, and yellow on the screen. The childs selects the color by

continued on page 11

Adventures in . . . ArtSpace

Take an interactive adventure to an art museum when you tour **ArtSpace**, the new CD-ROM from Macomb Projects. Developed for easy access by young children with disabilities, **ArtSpace** contains features that will delight children and adults alike.

ArtSpace can be accessed using the mouse, a TouchWindow, or a switch. Options for scanning and prompts are available for users who need them.

Begin your journey in the lobby of the **ArtSpace** museum where you will meet Trevor, the child guide who provides you with information about the museum's features and galleries and who is available to give you prompts when it's time to activate a switch.

Choose to enter one of two galleries, The Adult Gallery or The Children's Gallery. In The Adult Gallery, you will see works of art made by adults, some of them famous, some of them whose importance to the art world is yet to be recognized. The Children's Gallery contains art work from preschool and elementary school children. Both galleries contain examples of both two and three dimensional artworks. See video of various artists discussing their work or explaining a process, such as an adult explaining print making or bronze pouring or children demonstrating finger painting or collage making. Listen to people's comments about each picture, sculpture, or image and use them to generate your own discussions or thoughts about each work. See close-up views of each art work and listen to music which reflects the mood of the piece.

Encased in ormate frames in each gallery hallway are the choices of pictures that can be viewed close up. If none appeal to the gallery visitors, they need only click the next hallway to see new choices. And there's always a way to get back to the main lobby (a sculpture made of colorful building blocks) or to quit if time is short or visitors would like to explore the other gallery.

Fifteen different categories may be selected for a "QuickTrip" through the **ArtSpace** galleries, or visitors may choose to browse through randomly selected rooms at their leisure.

Back in the lobby, a third choice for exploring **ArtSpace** is The Studio, the special place in **ArtSpace** where children with disabilities who otherwise may not be able to create marks, may participate in a simulated drawing experience and recreate their favorite drawings from among the 113 that are available as choices. Drawings are accompanied by music. Each drawing may be printed so the child can have a copy of his work.

ArtSpace requires at least a Macintosh LC with System 7 or higher,a 14" or larger color monitor, and 4000 K of free RAM memory.

Make a $29.95 investment in art today! Order the **ArtSpace** CD-ROM for your classroom. Humor, music, video of real people doing real things, and lots of beautiful artwork combine to make this progam a great addition to the classroom software library.

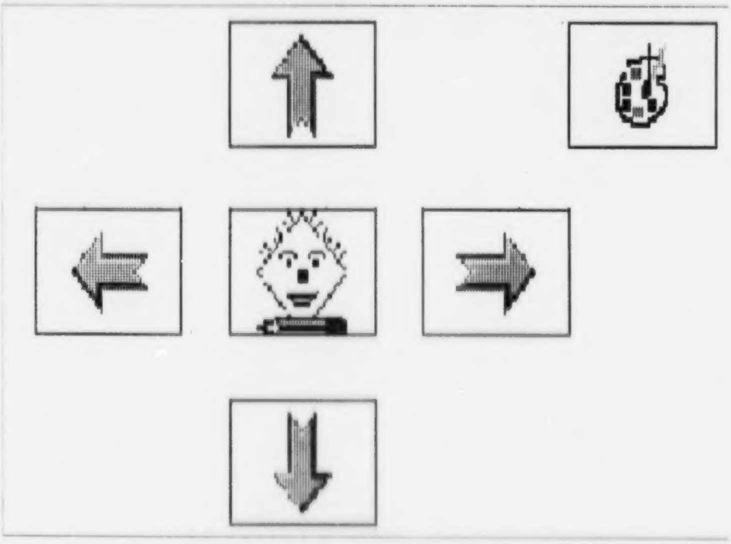
Purchase orders may be sent to Macomb Projects, 27 Horrabin Hall, WIU, Macomb, IL 61455 or faxed to 309/298-2305.

***An Adventure in Art* continued from page 10**

stopping the cursor with a press on the palette icon. The child can then continue drawing as in the first setup.

These four Ke:nx set-ups were designed to provide enjoyable art experiences for all preschool children. They are part of the art curriculum activities being developed by the Expressive Arts Project and Project ACTT. If you are interested in obtaining a copy of the disk which contains these set-ups, please contact our Macomb Projects office at 309/298-1634 or fax 309/298-2305.

Touch Tablet #2



Exceptional Computing Offers Music Mat Kit and Adapted Keyboard

A musical activity preschool children in the Expressive Arts Project sites always enjoy involves playing the Music Mat. Developed by Becky Atwood, FDLRS/TECH, the Music Mat consists of 20 notebook switches tucked into pockets of a large vinyl tablecloth and connected to an adapted keyboard. When the Music Mat is spread on the floor, children can play songs or make musical sounds by stepping on the keys (the pockets holding switches) or by rolling crawling, or scooting on the mat.

Contact Exceptional Computing at 904/331-8847; fax 904/331-4164 for more information.

Project ACTT Sets Dates for Summer Training

Project ACTT's final summer training sessions will be held July 31 - August 4 at Western Illinois University in Macomb, IL.

For five days, ACTT training participants will learn about basic computer operations, try their hands at constructing switches and battery interrupters, focus on technology applications for birth to three and preschool children with mild to severe disabilities, discuss ideas for curriculum integration, and spend time previewing and reviewing software from Macomb Projects' software library.

Participants from schools or agencies agreeing to replicate the ACTT model are provided the five days of training at no charge. Others may attend one or more of the sessions for a fee which ranges from $100 to $300, depending on the number of days attended. A packet of training materials is provided.

Participants will use a Macintosh computer; however, Apple II series computers will be available.

Space is limited so trainers are able to provide participants with individual attention.

More information about replication and training are available from ACTT Coordinator, Linda Robinson. She may be reached at 309/298-1634; fax 309/298-2305.

Switch Workshops Available from Illinois' Mr. Switchman

The ACTT VI Conference, held in Macomb, IL in March drew participants from across Illinois, as well as from other mid-west states. A major attraction of this year's conference was Patrick Meckley, "Illinois' Mr. Switchman," who is the Director of the Assistive Technology Center at the Fox Developmental Center in Dwight, IL.

In addition to presenting at conferences in Illinois and across the country, Patrick is available to present hands-on switch-making workshops for agencies and organizations interested in hosting such opportunities for their staff and/or parents.

Three workshops are available:

Let's Switch to Independence through Affordable Assistive Technology (Beginner Switches) is a fun, practical workshop for the construction of three switches, a Sandwich Switch, a Videotape Box Switch, and a Sip/Puff Switch.

All Turned On and Ready for Affordable Assistive Technology (Devices You Can Do) is a workshop for modifying feedback devices that interact with switches. Featured items are a remote controller that turns on and off any 110 volt appliance or light, a $10, ten second digital communication device, and an AM/FM radio.

Advanced Devices (I'm An Old Pro) teaches participants to modify a universal remote controller for a TV/VCR/Cable box and to build the IC 386 amplifier that can boost the output of the digital communication device.

A maximum of 32 participants per session is allowed. Each session lasts three hours, and Meckley provides all tools and equipment necessary for constructing the devices.

For a list of prices and dates of availability, contact Patrick Meckley, 123 E. Chippewa Street, Dwight, IL 60420; 815/584-2699.

Communication Screens For Popular Children's Games

Preschool or elementary school children who cannot speak or who are unable to participate in games because of physical limitations may now enjoy playing popular childhood games with parents, siblings and peers.

I Can Play, Too! from Mayer-Johnson Co. is a set of communication screens for use while playing such games as Simon Says, Cootie, Go Fish, Battleship, Checkers, and Red Light-Green Light. It is important to know that the program is *communication screens,* not the actual games. All of the screens, except Battleship, may be set to scan for single switch access.

A digitized voice speaks for the child clearly and enthusiastically.

The program runs on a Macintosh and requires 2MB RAM, hard disk, and HyperCard. It costs $89.00.

Contact Mayer-Johnson at 619-550-0084; fax 619/550-0449.

Clever Computer Products Relieve Computer-Related Stress

Face it, we adults have a love/hate relationship with our computers. When they work and do everything we want them to, we couldn't be more pleased. But when they start "acting up," we get MAD! Since throwing your computer out the window isn't very cost-effective, you might try instead some of the stress relievers offered by Computer Fun, a company that manufactures practical and fun accessories for computer users. Products are clever, well-constructed, and affordable, ranging in price from $9.95 - $24.95.

Products that adults appreciate and enjoy include the following: Happy Face machine washable dust covers for Apple, Macintosh, and IBM/PC computers as well as for keyboards and printers; the Macky Sac wrist rest bag; Smack It, a soft stuffed stress reducer in the shape of a computer to throw, punch, or abuse when you are frustrated with the problems your more-expensive computer sends your way, complete with a Users Guide; Data Dog, "The Computer's Best Friend," complete with Owner's Manual with care and training tips to teach it to "Find, Retrieve, and Guard" your files; MiniMood, a soft stuffed computer doll with a different face (happy, sad, angry, stressed out) on each side for users to display as a welcome or warning to co-workers.

Products include a variety of colorful, creative mouse pads that both children and adults will enjoy. These include animals (Teddy Bear, Rhino, Pig, Cat, Cow, Elephant, Dinosaur, Giraffe, Shark, Killer Whale, Mouse, and Lamb), Major League Baseball, NFL Football, and scenes from Star Trek, Star Wars, The Jetsons, The Flintstones, Teenage Mutant Ninja Turtles, Carmen San Diego, and Cathy. The shapes, colors, and facial expressions on the animal pads make them especially appealing to children. (Adults also find them charming and have trouble choosing "just one.")

A 10% discount is offered to schools. Irregulars are often available for a fraction of the price. The company accepts purchase orders and provides a 60 day guarantee.

Both IBM and Macintosh magazines have listed Computer Fun products as great gift items.

For more information or for an order form, contact Gary O'Mary at 619/271-9090 or 800/521-8484.

Network Provides Comprehensive Disability Information

DRAGnet, a Minnesota based non-profit group serving people with disabiltiies, operates DRAGnet International Disability Network (DIDnet), a computer on-lone disability information resource which carries a comprehensive array of disability information. Subjects include Americans with Disabilities Act and other disability-related issues; Health and Disability Policy; Job Opportunity and Employment referrals; Visual, Hearing, and Mobility Impairments; Learning Dysfunctions; Developmental Disabilities; Mental Health and Emotional Disorders; Traumatic Head Injury; Rare Diseases; Substance Abuse; AIDS/HIV; and others. It can be reached 24 hours a day with a computer and modem at 612/753-1943 (ANSI emulation, eight data bites, no parity, and one stop bit [8-N-1]).

Kids Create Musical Events with *Cyberboogie*

Cyberboogie with Sharon, Lois, and Bram, CD-ROM for either Macintosh or Windows, gives children, ages 3 - 9, fun opportunites to create dances and other musical events using the program's collection of SuperScenes, AniMates, and Wacky Things.

The program contains a variety of popular children's music by Sharon, Lois & Bram, including such songs as "Eensy, Weensy Spider," "Jelly, Jelly in My Belly," and "Skinnamarink."

Objects that change shape, surprises that are hidden in backgrounds, and animals with moveable and interchangeable body parts provide children plenty of opportunities for discovery learning and creative play as they create original characters and animate them for a musical extravganza that is theirs from beginning to end. Shows can be saved to play again and again.

Cyberboogie is available for $44.95 from Times Mirror Multimedia. Contact the company at 800/747-1787.

Hartley Software on Sale Through June

Hartley Courseware offers software at special savings through June 30, 1995. Savings range from $4 to $20 per program. For example, Dr. Peet's **Talk/Writer**, totally redesigned for the Macintosh, now sells for $59.95. After June 30, the price increases to $79.95. Six other language programs for young children (e.g. **Animal Antics**, **The Time Shop**, **World of Numbers**) each now sell for $35; after June 30, they will cost $39 each.

In addition, Apple II users can take advantage of Hartley's "Buy Two Get A Third Free" sale, which also goes until June 30.

Call Hartley at 800/247-1380.

Software Review

A New and Improved Frog & Fly!

by Linda Robinson

All of you Apple Frog & Fly fans are going to love this new version of Frog & Fly for the Macintosh. Bill Lynn has given the frog more character, more color, and a definite personality with croaks and burps! The best part of the program is the number of switch variations available. There are four switch activities all based on the frog catching the fly.

"Feed the Frog" is a simple cause and effect activity. The fly remains stationary at the top of the screen. A press of the switch at any time will cause the frog's tongue to stretch out and catch the fly. The frog then makes a satisfied sound and the fly re-appears at a different location on the screen. Everything remains quiet and still until the next switch press.

The second activity, "Trap the Fly 1," is designed as a 2-switch stepped scanning activity. One switch press moves a circle across the top of the screen, one step at a time. The second switch press signals the frog to catch the fly. If the circle is not positioned on the fly when the second switch is pressed, the user hears a child's voice saying, "Uh-oh, try again." The third activity, "Trap the Fly 2," is designed for one-switch linear sequential scanning. The scans begins automatically across the top of the screen. The user must wait until the circle is on the fly before pressing his switch. This activity will help reinforce visual tracking skills and teach beginning scanning skills. There is also an option in the program for setting your own scanning speed.

Last, but not least, is the fourth activity, "Frog & Fly," known as the "classic game of reaction time." The fly starts across the screen and it is your job to catch it with a switch press, just like the old public domain version. There are three choices of scan speed, slow, medium, and fast. And you had better be experienced if you try the fast option. That fly moves very quickly across the screen. However if you find you're not as quick as the fly, the next time he comes around, he will be moving a bit slower. Of course the opposite is true if you find yourself a competent fly catcher. The fly will increase his speed until you miss again. Whichever speed and activity is chosen, the user gains skills in switch use in an enjoyable way.

Bill Lynn has taken a popular public domain program and added some character and a few switch training options. The result is a great program for the new generation of Macintosh switch users. If you liked the old Frog & Fly, you are going to love this new one! This software is available for $20.00 from Simtech Publications, 134 East Street, Litchfield, CT 06759, 203/567-1173.

New TASH Catalog Appealing, Informative

The 1995 TASH inc. catalog is colorful, interesting, and informative.

For a copy, contact:
TASH inc.
Technical Aids & Systems for the Handicapped, Inc.
Unit 1 - 91 Station Street
Ajax, Ontario LiS 3H2
Canada
800/463-5685
905/686-4129
Fax: 905/686-6895
Internet: tashcan@aol.com

ClarisWorks Resources Available from C-WUG

ClarisWorks Users Group (C-WUG) has numerous materials available to help adults understand and get the most from **ClarisWorks**. Such offerings include **Hands-On ClarisWorks** ($29.95); **Complete Guide to ClarisWorks** ($29.95); **ClarisWorks Step-by-Step** ($13.95); **Getting Up to Speed with ClarisWorks** ($24.95); and **Getting Started with the ClarisWorks Database** ($14.95).

C-WUG also offers audio visual materials, reference books, and templates, all at reasonable costs. In addition, persons may join C-WUG ($34) and receive a free year subscription (10 issues) to **ClarisWorks Journal**, a 32-page newsletter dedicated to enhancing productivity with **ClarisWorks**.

Contact C-WUG at Box 701010, Plymouth, MI 48170; 313/454-1969; fax 313/454-1965.

Innocomp Offers Communication Product for Beginners

Innocomp's Routine Talk is an early communication vocabulary for those who are just beginning to understand and send simple messages.

The system uses the keys of the Say-It-All or the three inch squares on the Say-It-Simply Plus. It includes 200 messages and 25 overlays. Designed so that users and their partners can exchange actions and messages as they participate in play and daily living routines, it also provides a gradual progression toward the early learning skills needed to read, write, and use the next level of vocabulary access.

Contact Innocomp at 800/382-8622 for more information about this early communication system.

Calendar of Conferences

June 9-14, 1995: RESNA '95 RECREAbility Conference in Vancouver, Canada. Contact RESNA, Suite 1540, 1700 Moore St., Arlington, VA 22209-1903; 703/524-6686.

June 16-19, 1995: National Educational Computing Conference (NECC '95) in Baltimore, MD. Contact Doris Lidtke, 1705 East West Highway #611, Silver Spring, MD 20910.

June 17-19, 1995: Emerging Technologies Lifelong Learning in Baltimore, MD. Contact University of Oregon, 1787 Agate St., Eugene, OR 97403-1923.

July 10-14, 1995: ConnSENSE '95 in Cromwell, CT. Contact Chauncy Rucker, A. J. Pappanikou Center Technology Lab, U-64, 249 Glenbrook Road, Storrs, CT 06269; 203/486-0165.

July 30-August 1, 1995: 1995 Partnerships for Progress Conference in Washington, DC area. Contact NEC*TAS, 500 NationsBank Plaza, 137 E. Franklin St., Chapel Hill, NC 27514.

September 25-26, 1995: Instruction, Inclusion, and Technology Conference in Austin, TX. Contact Jamie Judd-Wall, Technology and Inclusion, P.O. Box 92109, Austin, TX 78709-2109; 512/280-7235.

September 25-26, 1995: 6th Annual Emphasis on Technology Conference Hosted by Educational Resources in Rosemont, Illinois. Contact Educational Resources, 1550 Executive Drive, Elgin, IL 60123.

October 19-21, 1995: Closing The Gap Conference in Minneapolis, MN. Contact CTG, P.O. Box 68, Henderson, MN 56044.

October 25-27, 1995: Ninth Annual Technology + Learning Conference, INFORUM, in Atlanta, GA. Contact NSBA, 703/838-6722.

November 2-4, 1995: Diversity in Early Childhood: Broadening Realities, Valuing Diversity: 11th Annual International Early Childhood Conference on Children with Special Needs in Orlando, FL. Contact DEC, 3 Church Circle, Suite 194, Annapolis, MD 21401.

November 30-December 3, 1995: Fourth International Conference on Telecommunications in Education in Ft. Lauderdale, FL. Contact ISTE, 1787 Agate Street, Eugene, OR 97403.

March 14-15, 1996: ACTT VII Early Childhood and Technology Conference in Macomb, IL. Contact 309/298-1634.

Switch Interface Available for IBM or Compatibles

The Danton Kids Single Switch Interface allows any remote switch to interface with any IBM Personal Computer or PC compatible single switch software that commands the user to "Hit Any Key." When the user presses a remote switch which is plugged into the single switch interface, the software recognizes that switch press as a computer keyboard keypress. The Danton Kids Single Switch Interface is compatible with both DOS and Windows software.

Installation is easy and quick. The interface plugs into the back of the IBM PC or PC compatible; then the remote single switch is plugged into the interface.

The Danton Kids Single Switch Interface costs $99 and comes with a free Lifetime Warranty. If it malfunctions or is damaged for any reason, it will be replaced at no charge.

More information is available from Ken D'Antonio at 508/699-7229; fax 401/737-9911; or write Danton Kids, 28 Mount Vernon Avenue, Noth Attleboro, MA 02760.

Summer Workshop Features Software, Learning Styles

Wisconsin Assistive Technology Initiative is sponsoring a 2-day summer workshop presented by Eileen Pracek, who is from the Florida Diagnostic and Learning Resources System (FDLRS). Workshop content will focus on matching software to a student's learning style, interests, and skills and will include both demonstration and hands-on opportunities.

Using Gardner's classifications of intelligences (Linguistic, Logical-Mathematical, Spatial, Musical, Bodily Kenesthetic, Interpersonal, and Intrapersonal), Pracek will categorize specific software features that are effective for children who possess a high degree of a particular intelligence.

Workshop dates are June 22 and 23. Cost is $50 for 1 day and $85 for both days. The workshop will be held in Amherst, WI. Call 800/831-6391 for more information. Registration closes June 5.

Mouse Repair

Do you have a mouse that's broken? Send it to Kitchen Sink Software, Inc. The company fixes broken mouse buttons for under $30 (and includes a year warranty on parts and labor). While your mouse is there, the company will clean its interior and rollers and recondition the ball's surface at no extra charge.

Purchase orders are accepted. If a mouse is beyond repair, the company will return it to you free.

Call 800/235-5502 for more information.

Register Now for ACTT Training! See page 12.

ACTTive Technology Subscription Form

Name ____

Agency ____

Street Address ____________________________________

City ______________________ **State** ___________ **Zip** ___________

For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
Orders from outside the U.S. must be paid for in U.S. funds drawn from U.S. banks.

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ACTTive Technology

Project ACTT, Western Illinois University, Macomb, IL 61455

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VOLUME 10, NUMBER 3 Summer 1995

Tech Tips from the Field: Putting Technology to Work in Your Classroom

by Linda Robinson

Whether you are just starting to use technology in your program or consider yourself a near expert in the field, there are some common considerations that need to be kept in mind when designing computer activities and the environment. The following tips have been compiled from recommendations that ACTT staff have made to sites during follow-up visits and consultations. Most of these points consist of factors which are often overlooked as site staff get caught up in the excitement of using the technology itself.

Designing the Environment

Although classroom space is understandably limited at many sites, equipment should be arranged so that children are not distracted by the appearance of extraneous pieces of equipment. The monitor should be placed at the children's eye level with the keyboard hidden from the children's view. A cloth (static-free) cover, a piece of cardboard or a cardboard box could be used to cover the keyboard when it is not in use by the children. Often the keyboard is used only by the adult to set up a program for the children. So covering the keyboard and pushing it slightly out of view may help to eliminate distractions. A simpler visual environment is presented for the children, causing less confusion for some. They are not tempted to press keys on the keyboard and expect a response.

Modifications may be needed in the computer table used. Make sure that it is adjustable. The table should be designed so that the monitor can be placed at a comfortable eye level for any child. The height of the table should be adjustable so that a child in a wheelchair can use the table as suitably as a child in a small chair.

Peripherals should be placed in a stable position for the children. A slant board may be needed for some children to use touch tablets, such as Key Largo™, the Muppet Learning Keys™, or the Power Pad™. This would place the device at an angle and provide a firm surface for pressing. For switch use, a homemade or commercial switch holder provides stable placement.

Designing Computer Activities

Children will gain the most benefits from technology use if activities are integrated into the preschool curriculum. The following suggestions may help when designing activities.

- Plan activities around a child's individual goals or classroom goals. By thinking of the goal for the activity it is easier to plan software and activity procedures.
- Include off-computer activities and materials as part of the technology activities. Materials can be made for use prior to, during, or following the computer activity. Many children can relate to objects and concepts when they have figures or books with which to play. Off-computer materials may also be items which children can take home and share with their families.
- Activities can be simplified to fit individual children's needs. For example, the number of choices presented on an overlay should match the child's developmental level. Design your own overlays for touch tablets, beginning with two or three choices and increasing the number as the children progress. If commercial overlays are used, cover items which do not need to be activated. Reduce the number of choices for peripherals which are visually over-

continued on page 3

Inside this Issue of ACTTive Technology:

Tips and a Sample Budget Plan for Buying Classroom Computers.. See page 5

Single Switch IBM Software...........................See page 6

Top 20 Macintosh Programs........................See page 10

EC 306030

From The Editors. . .

by Linda Robinson

How hot is it? It's so hot .....my computer forgot the answer to the question. Well hopefully you haven't fried any circuit boards this summer. And if you have, then you were ready for a new computer anyway. Right?

If you are hoping to obtain new equipment this year, we have just the information you need on planning and buying computer systems. If you work for a school district you may want to share this issue with administrators and school board members. Depending on your program, there may be different software needs; however, the idea of a three year plan is a sound one. It can be adjusted for a larger school system or sized down for a smaller one. The main objective is to provide some technology now for all of the children whether it's new or used. Then work toward updating equipment so that access is provided equally. If the administration is sold on the underlying theory of the plan, the logistics will get worked out. And if you need some ideas for other software, check out our Top 20 list of Mac programs.

If you are one of the lucky ones to have access to new equipment this coming year, then environment and curriculum may be more of a concern. We have included tips which we give to our sites based on factors we have found to be most successful to using technology. Sometimes the basic setup of the equipment to meet children's needs is often the most overlooked factor. We all agree that children need to have the computer positioned at their level; however, getting down there is often a problem. The ideas we have included here may help.

Ways to design off-computer materials and activities are always welcome information. Even though our staff provide workshops and presentations on this subject, we are always anxious to see what materials others have made to go along with computer programs. We all can use fresh ideas and expand on them to meet our own children's needs.

As you read through the tips, you will note that ACTT has a strong philosophy on technology integration which focuses on the design of the activities rather than the technology itself. This seems to represent a different perspective than that of MOBIUS. We have included their article here to make you aware of their concerns with young children using technology. They are a national organization commited to helping families and children. Some of their concerns are valid; however, keep in mind that the way a teacher or parent uses software with young children is as important as the content of the program itself. If two or more preschoolers are using the computer together, they are learning many more social skills than the content of any software program could be teaching them. Many of the benefits of technology come from the design of the environment or the activity, rather than from the technology itself. "Appropriate" use of technology to us means using this powerful tool to meet the individual needs of children. Whether you agree with our philosophy or the concerns of MOBIUS, this article provides fuel for some interesting discussions.

If you would like to voice your concerns with other professionals or families, or just find out more about "appropriate" use of technology, we invite you to attend the ACTT VII Conference, March 14-15, 1996, in Macomb, Illinois. This is the conference that transforms EC people into techies in two days! Details on keynote speaker and presentations will be included in the next issue. Until then. . .keep cool!

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Technology Tips continued from page 1

whelming, such as the Muppet Learning Keys, by placing a thin piece of cardboard over a portion of the pad. At the easiest level, just **Stop** and **Go** could be presented to the child. At other times, the letter keys could be visible for the Discovery portion on the disk. If the children are learning colors or number concepts, these portions of the pad could be visible and the other parts covered with the overlay. This adaptation provides a simple solution for meeting a variety of children's needs.

- Activities could also be customized to meet special needs through use of the Unicorn Expanded Keyboard, Key Largo or a switch. The Adaptive Firmware Card could be used with the Apple computers, and Ke:nx can be used with the Macintosh computer. With these computer interfaces, software can be adapted for switch or adaptive keyboard use. Since software availability may be limited, these adaptive devices help expand the software use for all children.
- Plan computer activities which involve small groups of children. In this way a number of children can benefit from the group interaction. Off-computer materials can be used with groups of children to reinforce concepts in the software.
- Integrate concepts from the software into a variety of activities in the classroom and in the child's natural environment. Communication boards and aprons are a great way to provide choices and communication opportunities to all children at all times. Communication symbols could be used on the Unicorn Expanded Keyboard or the Key Largo to provide verbal and print output. Begin with a few choices and gradually increase the number as the children become familiar with more symbols.

ACTT staff had the opportunity to observe an early childhood program which uses a total communication system in every part of their building. The Just Kids Learning Center in Middle Island, New York, displays communication cards and choices for children throughout their program. To provide total communication experiences for the children, Meyer-Johnson symbols were used in many of the classrooms and in the halls. Symbol cards with a large number of choices accompanied games which were set up in various locations throughout the hallways of the building. The games provided indoor recreation for the children on rainy or cold days when they could not play outdoors.

One final tip (which may be the hardest of all to follow, but may also ensure your successful use of technology) is to *spend time learning the equipment and software.* The more confidence you gain in your technology skills, the easier it will be to create an exciting learning environment for your children. The challenge of learning is ongoing as new technology and new software is marketed.

Keep these helpful tips in mind as you plan activities, and who knows, you may become the technology expert you never thought you could be.

Report Explains Preschool Grants Program, Discusses Achievements

Assisting Our Nation's Preschool Children with Disabilities and Their Families is a briefing paper on Section 619 IDEA's Part B. The report explains the Preschool Grants Program and the services provided.

Four significant achievements of the Preschool Grants Program since 1986 are discussed:

- more children with disabilites are receiving services;
- programs are improved by innovations in service delivery;
- services are more cost-effective and comprehensive through increased interagency collaboration;
- a greater number of highly-qualified personnel are available to provide services.

A third section addresses future challenges and goals for the Preschool Grants Program.

Finally, references are included as are appendices. Appendices include names and addresses of the Ad Hoc 619 Work Group, key people in the U.S. Department of Education, and State and Jurisdictional Section 619 Program Coordinators.

Copies of this briefing paper are available in printed format ($5) from NEC*TAS, 500 NationsBank Plaza, 137 East Franklin Street, Chapel Hill, NC 27514.

Copies are also available electronically via the Early Childhood Bulletin Board on SpecialNet and the World Wide Web at the NEC*TAS home page. That access is http://www.nectas.unc.edu/

Technology Assessment is NOT Just Augmentative Communication Assessment

How does a team work together to recommend the appropriate input devices, positioning, adaptations, computer, and software for a young child with disabilities?

Find out by participating in TTAP Training. Call Linda Robinson, 309/298-1634 for registration information and training dates.

A Museum Visit—without Leaving Your Classroom!

Take an interactive adventure to an art museum when you tour **ArtSpace**, the new CD-ROM from Macomb Projects. Developed for easy access by young children with disabilities, **ArtSpace** contains features that will delight children and adults alike.

ArtSpace can be accessed using the mouse, a TouchWindow, or a switch. Options for scanning and prompts are available for users who need them.

Begin your journey in the lobby of the **ArtSpace** museum where you will meet Trevor, the child guide who provides you with information about the museum's features and galleries and who is available to give you prompts when it's time to activate a switch.

Choose to enter one of two galleries, The Adult Gallery or The Children's Gallery. In The Adult Gallery, you will see works of art made by adults, some of them famous, some of them whose importance to the art world is yet to be recognized. The Children's Gallery contains art work from preschool and elementary school children. Both galleries contain examples of both two and three dimensional artworks. See video of various artists discussing their work or explaining a process, such as an adult explaining print making or bronze pouring or children demonstrating finger painting or collage making. Listen to people's comments about each picture, sculpture, or image and use them to generate your own discussions or thoughts about each work. See close-up views of each art work and listen to music which reflects the mood of the piece.

Encased in ornate frames in each gallery hallway are the choices of pictures that can be viewed close up. If none appeal to the gallery visitors, they need only click the next hallway to see new choices. And there's always a way to get back to the main lobby (a sculpture made of colorful building blocks) or to quit if time is short or visitors would like to explore the other gallery.

Categories may be selected for a "QuickTrip" through the **ArtSpace** galleries, or visitors may choose to browse through randomly selected rooms at their leisure.

Back in the lobby, a third choice for exploring **ArtSpace** is The Studio, the special place in **ArtSpace** where children with disabilities who otherwise may not be able to create marks, may participate in a simulated drawing experience and recreate their favorite drawings from among the 113 that are available as choices. Drawings are accompanied by music. Each drawing may be printed in color.

ArtSpace requires at least a Macintosh LC with System 7 or higher, a 14" or larger color monitor, and 4000 K of free RAM memory.

Make a $29.95 investment in art today! Order the **ArtSpace** CD-ROM for your classroom. Humor, music, video of real people doing real things, and lots of beautiful artwork combine to make this progam a great addition to the classroom software library.

Purchase orders may be sent to Macomb Projects, 27 Horrabin Hall, WIU, Macomb, IL 61455. Add $5.00 for shipping and handling charges. For extra savings, mail the coupon below.

Save $$$$$$$$$$$$$$ when you order ArtSpace

Attach this *Money Saving Coupon*
to your order form or purchase order
and take **$5.00** off the purchase price
of **ArtSpace**!

Hurry, this offer expires 10/31/95!
Orders must be received by that date.

This coupon may not be photocopied

Literacy Symposium Focuses on Assistive Technology and More

Emergent literacy, assistive technology and literacy, literacy strategies for individuals with severe/profound disabilities, literacy and inclusion, and interactive literacy lessons and materials are among the topics for the 5th Symposium on Literacy and Developmental Disabilities. The conference, sponsored by the Center for Literacy and Disability Studies, University of North Carolina at Chapel Hill, will be held in Research Triangle Park, NC on January 25-26.

The first Don Johnston Incorporated Literacy Lectureship Award will be presented at the symposium to an individual who has made outstanding contributions to the literacy learning of a person with disabilities.

Interested persons should contact Stephanie Whitmore, Center for Literacy and Disability Studies, CB #8135, UNC-Chapel Hill 27599-8135; 919/966-7486; fax 919/966-3864.

Planning For and Buying a Computer System for Young Children

by Carol Schneider

Macintosh or PC? Which should you buy? Everyone has an opinion—and everyone's opinion differs, depending on their background of computer systems.

Back in the 1980's, the Apple IIe computer was the best choice for young children, especially for young children with disabilities. The Apple IIe was easily accessible and adaptable for different needs. Software was plentiful. Hardware and peripheral devices were easy to purchase and modifications to the computer system were effortless. For many educators and families, it was a sad day when the Apple IIe and the Apple IIGS computers became "obsolete."

Today, most software is available on both the Mac and PC. The Mac is still dominant in the design, education, and early childhood fields. Most businesses go with what they are comfortable with—the PC. For most business, Window machines dominate. The PCs and Macs now have much more in common than ever before, and this is likely to continue. As a result, making a decision about which computer system to buy is difficult[1].

Project TTAP (Technology Team Assessment Process) makes its recommendations based on the most current computer system and input devices available for school and home use. Presently the recommendation for a computer system is a Power Macintosh 6100/66, 8MB RAM, 350 CPU with CD-ROM drive or a Macintosh Power 5200/75 LC 8 MB RAM. Both of these systems have the Power PC chip which provides the capability of using Macintosh or IBM software. (According to the February, 1995 issue of **Macworld**, any machine that does not contain this chip will be obsolete by the end of this year.) However, just because a Macintosh computer has the Power PC chip, does not give it IBM compatibility. Special software, such as *SoftWindows* from Insignia, is needed to use IBM software.

Each of the recommended computer systems has 8MB RAM and at least 350 CPU which provides plenty of working space and storage for programs on the system. Both models contain an internal CD-ROM drive, which is essential for using newer programs available on CD-ROMs. A microphone is recommended to record voices for some software programs (such as *Millie's Math House* and *Kid Desk* [Edmark]) and augmentative communication. Both machines are recent computer systems and are adaptable to meet many children's current and future needs.

You may pay more money for a Mac than a PC. However, the PC often has to be custom configured, set up with various hardware such as a CD-ROM, video card, sound card, and/or printer.[2] With a Mac, all you need to do is plug in the CPU (Central Processing Unit), monitor, and printer and the computer is ready to go.

Considerations

If you are planning to buy a computer system for a young child with disabilities or a classroom, consider the following:

- Is technology training available for your computer system?
- Is technical support available?
- Is the system easily accessible?
- Is age appropriate software available?
- Is age appropriate software with options (such as device input and scanning) available?
- If switch accessible software is needed, would that computer system support these programs?
- What computer system are most children with disabilities using?
- What computer system is the school district using?
- What computer systems do vendors who assist children with disabilities support?

continued on page 6

Computing Newsletter Offers Practical Information for Families

Family Time Computing is a periodical in newsletter-style format. Its purpose is to provide timely information to families to help them evaluate and select software appropriate to their children's needs. (Teachers will find the information helpful too!)

The great variety of software available and the continued release of new software is often confusing. The ads make it all sound so good. But on limited family (and classroom) budgets, it's impossible to buy everything. *Family Time Computing* helps.

A year's subscription (10 issues) is $14.95. To subscribe, send a check or money order, along with your name, address, phone number, E-mail address (if you have one), type of computer you have, children's names, birthdate, and sex to: Family Time Computing, P.O. Box 1361, Bloomington, IL 61702.

Single Switch Software for IBMs

Judy Lynn Software has available a product catalog of single switch software for IBM/PC and compatibles. The Judy Lynn PC Adaptor ($23) connects your switch to your computer and enables you to run all Judy Lynn Software programs with a switch. (The software will also run using a keyboard instead of a switch).

Cause & Effect ($20) is designed to introduce a child to the computer and switch, to improve tracking, and to increase attention span. The program is composed of brightly colored, animated geometric segments accompanied by captivating sounds. The program contains over 30 segments and is intended for children with cognitive levels from 9 months to 3 years. Data can be saved to disk and used to print reports or graphs of the child's progress over time.

Fundamental Concepts ($29) is intended for children with cognitive levels of 1 to 4 years. It is designed to teach a variety of concepts (e.g., shapes, colors, block stacking, gravity, cause and effect, spilling) through colorful, animated graphics and interesting sounds.

Switch Art ($29) was designed for children with limited motor skills and cognitive age levels as young as 1 year. It is intended to reinforce cause and effect concepts, color selection, eye-hand coordination, and vertical and horizontal tracking skills. The program includes 20 pictures. Interesting sounds help keep the children's attention.

Visual Motor Skills ($35) was designed to emphasize and reinforce the following concepts in conjunction with switch activated cause and effect: basic visual motor skills, visual scanning, vertical and horizontal tracking, color and shape sorting, block stacking and alignment, in and out, and pegboard concepts. The program has 11 selections—a life-like hand will pick up and object and then move back and forth across the screen. Pressing the switch at an appropriate time causes the hand to release the object.

For more information about these programs, contact Judy Lynn Software at 278 Dunhams Corner Road, East Brunswick, NJ 08816; 908/390-8845.

Planning for and Buying continued from page 5

- Can the computer be adapted for a child/children with disabilities? What adaptive peripherals are most appropriate for the child and which type of computer is compatible with those devices? For the Macintosh computer, Ke:nx (an alternate computer access device by Don Johnston Incorp.) and IntelliKeys (an alternate computer access device by IntelliTools) will allow young users with disabilities to communicate and control the computer with ease. The IntelliKeys will also interface on the PC. Both interface systems are powerful, relatively inexpensive, and easy for both facilitator and user to access.

Also ask yourself:

- Is the system compatible with existing peripherals in the school, such as CD-ROM drive, Ke:nx, Intellikeys, augmentative communication device, or a switch input box?
- Is the system upgradable and/or expandable, allowing it to "grow" with the child or, if you are buying it for home use, your family?
- Does the system have enough processor speed and RAM to allow you to run software you plan to use with your child (storing speech for augmentative communication)? If not, what will be the cost of additional RAM?
- Is the hard drive on the system large enough? Does it have enough memory to install all of your early childhood software and some adult applications?
- How long will the new system fit into your child's educational plan? Can you easily remove software and install different software for your classroom or child? Can you easily change the peripherals for the classroom or child?

Budget

Instead of looking at how much cash your computer system will cost at the moment, it's a good idea to set a budget for your computer purchases for the next three years. Plan as far ahead as possible, taking into consideration the different grade levels and needs of your child or classroom. Choosing smart will allow you to easily upgrade your computer system.

Use the trickle-down policy. Older computer systems, such as the Apple IIe or Apple IIGS computers, are welcomed in Birth to Three programs, homes with children with disabilities, before and after school programs, or in other classrooms. Recycle the older computers with their software and peripherals.

Refer to the Technology Plan on page 7 for an idea about budgeting for technology. This plan was designed for a school district having three classrooms for children with severe disabilities. (Each classroom serves 10 children.) Recently this school district understood the value and impact technology can have for young children with disabilities and made the commitment to implement technology into the curriculum. With this plan, the average technology cost for the next three years will be $181.90/child/year.

[1] Field, D. (1995, July). Planning and buying hardware. Technique 2 (7)16-26.

[2] Ibid.

Kid Desk [software]. 1992. Redmond, WA: Edmark.

Millie's Math House [software]. 1992. Redmond, WA: Edmark.

continued on page 7

Planning for and Buying continued from page 6

Budget Plan for Year One

Classroom #1

Use older computer equipment in the school district. This includes an Apple IIGS computer, ImageWriter Printer, Adaptive Firmware Card, Unicorn Board, TouchWindow, and a variety of software. This will be only for the first year.

Classroom #2

Purchase the following:

PowerMac 5200/75 LC CD-ROM Keyboard & color 15" display	$1, 759.00
ClarisWorks	$69.00
Ke:nx	$780.00
Key Largo	$320.00
Switch Intro	$95.00
KidPix	$36.00
Circletime Tales	$95.00
Hit 'n Time	$80.00
Toystore	$95.00
Bill Lynn Software:	
Frog & Fly	$20.00
Scan & Match	$20.00
Scanning Picasso	$20.00
One Switch Picasso	$20.00
Switch Puzzles	$20.00
Cows!	$20.00
Total	*$3,449.00*

Classroom #3

Purchase the following:

PowerMac 5200/75 LC CD-ROM Keyboard & color 15" display	$1, 759.00
ClarisWorks	$69.00
Ke:nx	$780.00
Switch Intro	$95.00
KidPix	$36.00
Circletime Tales	$95.00
Amazing Ways	$80.00
Camelphant	$65.00
Bill Lynn Software (See Classsroom 2 list)	$120.00
Total	*$3,419.00*

The school has a Unicorn Board from another classroom that can be used with the Ke:nx. Therefore, a touch tablet does not need to be purchased.

Total for Year 1
(Classrooms 1, 2, and 3): $6,868.00

Budget Plan for Year Two

Classroom #1

Purchase the following:

PowerMac 5200/75 LC CD-ROM Keyboard & color 15" display	$1, 759.00
ClarisWorks	$69.00
Ke:nx	$780.00
Key Largo	$320.00
TouchWindow/Mac	$335.00
Printer/Allowance	$500.00
External Speaker	$100.00
Switch Intro	$95.00
KidPix	$36.00
Circletime Tales	$95.00
Hit'n Time	$80.00
Toystore	$95.00
Bill Lynn Software	
Frog & Fly	$20.00
Scan & Match	$20.00
Scanning Picasso	$20.00
One Switch Picasso	$20.00
Switch Puzzles	$20.00
Cows!	$20.00
Total	*$4383.95*

Classroom #2

TouchWindow/Mac	$335.00
Printer/Allowance	$500.00
External Speaker	$100.00
Software Allowance	$200.00
Total	*$1,135.00*

Classroom #3

TouchWindow/Mac	$335.00
Printer/Allowance	$500.00
External Speaker	$100.00
Software Allowance	$200.00
Total	*$1,135.00*

Total for Year 2 $6,654.00

Budget Plan for Year Three

Classroom #1

IntelliKeys Pac	$650.00
IntelliKeys	
Overlay maker Mac	
IntelliPics	
ClickIt!	
IntelliTalk Mac	
Software Allowance	$200.00
Switch Allowance	$100.00
Total	*$950.00*

Classroom #2

IntelliKeys Pac	$650.00
IntelliKeys	
Overlay maker Mac	
IntelliPics	
ClickIt!	
IntelliTalk Mac	
Software Allowance	$200.00
Switch Allowance	$100.00
Total	*$950.00*

Classroom #3

IntelliKeys Pac	$650.00
IntelliKeys	
Overlay maker Mac	
IntelliPics	
ClickIt!	
IntelliTalk Mac	
Software Allowance	$200.00
Switch Allowance	$100.00
Total	*$950.00*

Total for Year 3 $2850.00

Total ExpenditureYears 1, 2, and 3:
$16,371.00

In this sample plan, Macintosh computers were recommended because the Macintosh supports a comprehensive variety of adapuve peripherals and software for the different needs of young children with disabilities.

Address Change

The Special Education Dissemination Center and Missouri LINC have merged to form the Center for Innovations in Special Education. The new address is

Center for Innovations in Special Education
Parkade Center, Suite 152
601 Business Loop 70 West
Columbia, MO 65211

BEST COPY AVAILABLE

Young Children and Computers: Three Issues of Concern

Excerpts from a May 26, 1995 letter to all parents from the Program Director at the MOBIUS Corporation:

As you are aware, in today's world, use of computers by young children is almost inevitable. The earlier children have experience with computers, the better they are prepared to accept and benefit from their use in the future. Presently, use of computers by young children is a reality in a number of child care classrooms. Early exposure to technology better prepares a child to accept and benefit from its use. Is your child in a program that has access to ***appropriate*** *use of computers?*

Three important issues relate to appropriate computer use for young children: ***equity, violence****, and* ***social and cultural awareness****.*

Equity

A recent Newsweek article (February 27, 1995) summarized reasons for concern:

- *white families are three times as likely as African American or Hispanic families to have computers at home;*
- *schools with the highest concentration of poor children have the least equipment*
- *of the 100 million Americans who use computers at home, nearly 60 percent are 17 or younger.*

These findings clearly point to dangerous patterns emerging that further gross inequities if careful attention is not given to how we incorporate access to this powerful tool into the everyday lives of all children and adults. An important part of this scenario is how to incorporate technology into the current educational curriculum and change attitudes to encourage appropriate use by all students...

Ironically, today's programs for children ("educational" games as well as "edutainment" packages) try to avoid issues of gender and race by presenting cartoon or animal characters instead of more realistic representations of characters. Even with these attempts to be neutral and non-controversial, stereotypes still persist. For example, examine how "female" animal characters are portrayed compared to "male" animal characters. Often females are supportive and docile, whereas males are aggressive and risk takers. Or the software promotes more "male" associated characteristics such as shooting or destroying objects on the screen...

Violence

When we examine the many examples of violence as a response to problem solving within software programs that permit a child to thoughtlessly press a key to blow up or "waste" someone or something, it should cause us to consider the implications of such empowerment. Software programs that empower children to freely blow up or destroy without thought of actual consequences of their actions can only further the disconnection between personal responsibility and violent outcomes.

Social and Cultural Awareness

On the positive side, software has the potential to offer children opportunities to develop sensitivities to children with disabilities or children from other cultures. Yet, in general, software publishers remain in the safe harbor of teaching basic skills rather than venturing into the riskier waters of teaching social and cultural values and lifestyles. As it stands today, most publishers encourage children to avoid more realistic and appropriate choices by limiting children's opportunities to identify with more real world characters. Much could be done to help children develop positive responses to cultural and racial diversity by offering software programs that enable children to explore the richness within their own and different cultures.

MOBIUS Corporation is committed to ensuring that every child and family have equal access to the benefits that appropriate use of computers can bring. The company encourages the sharing of this letter with parents, teachers, and child care providers. If anyone has questions or comments regarding this letter, call MOBIUS at 703/684-2911.

Lawrence Productions Introduces Two New McGee Programs

Lawrence Productions, famous for its Parents Choice Award-winning **McGee** series (**McGee**, **McGee At the Fun Fair**, and **Katie's Farm**), has announced two other **McGee** programs. **Kid McGee** is designed for use with Davidson's **Kid Works** or Brøderbund's **Kid Pix**. The cost is $29.95.

McGee School Days, like other McGee programs, uses a NO WORD approach. Activities include classic games such as duck-duck-goose, hopscotch, and others designed for preschoolers. Available for MS-DOS, Windows, and Mac and on CD-ROM, the software is $49.95.

Those classrooms that don't already have copies of the other McGee programs, can purchase them individually for $24.95 or as a triple pack for $49.95.

Order from Lawrence Productions at 800/421-4157.

BEST COPY AVAILABLE

Masterpieces Program Offers Activities in Art, Thinking Skills, Numbers

Magic Bear's Masterpieces software for young children contains four games which allow children to experiment with patterns, symmetry, and shapes.

"Tattle Tiles" is a problem-solving game containing sound and animation. Three levels of difficulty and 120 pattern puzzles are available.

"Magic Mirrors" challenges thinking skills. Children can add special effects to their creations. Choices include invert, rotate, color, and sound.

"Mosaic 1, 2, 3" has number tiles, a variety of colorful objects to count, and two difficulty levels.

"Masterpieces" is an art activity providing endless combinations of color, designs, shapes, and sounds. An onscreen palette provides choices of 10 basic shapes and 14 colors. Any shape selected appears on Magic Bear's easel. Children can then change it in a variety of ways. Colors can be changed, and the image rotated. Children place the tile on the grid by simply clicking the desired location. Magic Bear always provides cheerful, animated feedback each time a choice is made. Children can print their masterpieces or save them to disk.

Macintosh and Windows versions are $29.95. CD-ROMs for both Macintosh and Windows are $40.95.

Mac system requirements are System 7.0, 256 color monitor, and 2 MB RAM.

Order from Legacy Software, P.O. Box 5258, Chatsworth, CA 91319-9798; 800/532-7692; fax 818/885-5779.

Compact Scanner: Quick, Convenient Time Saver

What's the latest exciting product to help teachers increase their personal productivity, decrease the volume of paper that sits on their desks, and decrease time spent entering information from that paper into their computers?

It's PaperPort, a compact 300 dpi scanner for the Macintosh that fits neatly between the keyboard and monitor. About the size of a roll of aluminum foil, PaperPort accepts paper size as small as 2 inches wide and as little as 3 inches long. Maximum sizes are 8 1/2 inches wide and 30 inches long.

Visioneer, the company that makes PaperPort, says it's easy-to-use, fast, and flexible. All you do is insert a document . It instantly appears on your screen and within 6 seconds the scan is complete. You can arrange the document as you will, save it to disk, fax it, or run it through the optical character recognition (OCR) software (included with PaperPort), open the resulting text in your word processor and edit it, eliminating the hassle of retyping.

PaperPort scans fine text, as well as normal text and photos. An average 8 1/2 by 11 inch page of text can be stored in about 20K. You can save in BMP, PCX, PICT, and TIFF formats.

Installation is simple also. You connect PaperPort to your Mac serial port, plug it in to a power supply, and load the software. There is no power switch. PaperPort automatically turns itself on whenever you put paper into its slot to scan.

Think of the time you can save by scanning report formats, IEP forms, inventories, letters, and other paperwork! No more retyping, no more procrastinating because you can't find the time.

System requirements: Macintosh with 68020 or faster processor, System 7.0 or later, 4 MB of RAM, color or grayscale monitor.

PaperPort is not expensive when you think in terms of time saved. It costs $399. Call Visioneer at 415/812-6400 for more information.

(We cannot personally attest to the quality of this product since we have not tried one yet. However, it's worth checking out!)

Items for Visually Impaired Featured in Free Catalog

For a free catalog featuring over 500 items for the visually impaired, contact Ann Morris Enterprises, 890 Fams Court, East Meadow, NY 11554; 516/292-9232.

Magazine Offers Computing Information to Families

Family PC, a new magazine with information about Macintosh and IBM/PC compatibles, comes packed with hints, tips, and secrets for getting the most from your computer.

Topics of interest in each issue include what is new, what to buy, where to buy it, how to save money on computer and software purchases, family-tested games, troubleshooting tips, software and hardware reviews, on-line services, and more—including art, music, science, and craft projects! Each issue (there are 10 a year) also comes with a bonus *Megazine!* just for the kids.

Write to Family PC, P.O. Box 400453, Des Moines, IA 50347-0453 for subscription information.

Top 20 Macintosh Early Childhood Programs

If you were to make a wish list of software for your early childhood classroom, we recommend that you include at least some of the following titles. These are programs which offer children opportunities for learning many developmental skills. We have seen children use these programs successfully and with a great deal of enjoyment. All of the programs will work with the mouse or TouchWindow, and, as indicated, some of them also support switch or IntelliKeys input.

aMAZEing Ways (Switch) - JOKUS, Don Johnston
ArtSpace (Switch) - *CD-ROM* - Macomb Projects
Bayley's Book House - Educational Resources
Circletime Tales (Switch) - Don Johnston
EA*Kids Art Center - Educational Resources
Explore-A-Story - Rosie the Counting Rabbit - William K. Bradford
Frog 'N Fly (Switch) - Simtech Publications
Hit 'N Time (Switch) - JOKUS, Don Johnston
IntelliPics (IntelliKeys) - IntelliTools
Just Grandma & Me - *CD-ROM* - Educational Resources
KidPix - Educational Resources
Little Monster Goes to School - *CD-ROM* - Educational Resources
McGee programs (**McGee, Katie's Farm**, and **McGee at the Fun Fair**) - Educational Resources
Millie's Math House - Educational Resources
Sammy's Science House - *CD-ROM* - Educational Resources
Switch Intro (Switch) - JOKUS, Don Johnston
Storytime Tales (Switch) - Don Johnston
Thinkin' Things (Switch) - Educational Resources
Thinkin' Things 2 (Switch) - *CD-ROM* - Educational Resources
Toy Store (Switch) - JOKUS, Don Johnston

Where to Contact the Companies

Don Johnston Incorporated
P.O. Box 639
1000 N. Rand Road, Bldg. 115
Wauconda, IL 60084-0639
800/999-4660;708/526-2682 (fax)

Educational Resources
1550 Executive Drive
Elgin, IL 60123
708/888-8300; 800/624-2929
708/888-8499 (fax)

IntelliTools, Inc.
55 Leveroni Court, Suite 9
Novato, CA 94949
800/899-6687; 415/382-5950(fax)

Macomb Projects
27 Horrabin Hall
Western Illinois University
Macomb, IL 61455
309/298-1634; 309/298-2304(fax)

William K. Bradford
310 School Street
Action, MA 01720
800/421-2009; 508/263-9375(fax)

Animated Folksongs Follow American History

Sing An American Story, award winning educational CD-ROM software from MediaAlive, is a collection of 15 animated American folksongs designed to teach children about American history through music. The songs evoke themes of hard work, independence, freedom, and the pioneer spirit.

As they watch engaging animations, children can sing along. Children who can read, can follow the highlighted lyrics that appear across the bottom of the screen.

Older children may want to explore a song's history. The software features text and graphics which show a song's geographical and chronological connection to history and create an understanding of the events from which the song arose.

Songs include *Revolutionary Tea, Shenandoah, Blow the Man Down, The Erie Canal, Old Dan Tucker, Follow the Drinking Gourd, Acres of Clams, Michael Row the Boat Ashore, Battle Hymn of the Republic, Goober Peas, I've Been Working on the Railroad, Home on the Range, John Henry, Git Along Little Doggies*, and *Down by the Riverside*. The songs can also be played on any audio CD player!

The software sells for $25 from MediaAlive, 762 San Aleso Avenue, Sunnyvale, CA 94086; 408/752-8500; fax 408/752-8501.

For free copies of KIDWARE News, published quarterly by MOBIUS Corporation, contact the company at 405 North Henry Street, Alexandria, VA 22314, ATTN: Monica O'Day.

Supporting Classroom Diversity

A Bit of ME

by Letha Clark

ACTTive Technology provides this column as a regular feature for helping teachers use technology to expand their curricula to include cultural awareness and diversity.

The family stories we know from childhood (like the one I know about my grandfather and dad reroofing a REALLY tall hotel that even now seems tall) are part of our family heritage. These stories are passed orally, told and retold at family gatherings when adults reminisce about humorous, sad, or memorable occasions. Such stories are often recited at bedtime when parents tell their children stories and adventures from their childhood. Sometimes, they are used to teach family values or moral lessons (sort of like a family version of Aesop's Fables).

How exciting it would be to be able to write and illustrate a book based on family oral history. Well guess what—it is possible using one of the titles (**Tall Tales & American Folk Heroes** and **The Whole Neighborhood**) from the Big Book Maker series by Toucan.

Children can enter their story or dictate it to someone to enter and then add pictures of people, places, and things to enhance their tale. If the classroom software library includes more than one Big Book Maker title, you can broaden the choices and swap illustrations from the different programs. Stories can be printed in color with a color printer in sizes ranging from teeny tiny to great big.

The importance of each child's history will be celebrated every time their story is shared. Your reading area will become richer with the inclusion of each child's story, and family and cultural diversity can be celebrated.

Parents and other family members can become involved also by offering ideas for the children's stories or assisting during classtime when the books are being made. "Sharing Family History" might be a fun topic during a family night workshop. Everyone can join in the fun of creating and publishing the stories and sharing the books with each other.

Maybe it's not too late for me to write and illustrate a Tall Tale about a Tall Hotel!

According to the April 1995 Apple Education Resource, educators need to foster and encourage students to develop five skills that are critical to future success in this age of information. The skills are dynamic exploration, problem solving, inquiry, collaboration, and media handling. Find out how computers and software can assist young children development these skills. 800/800-APPL.

Calendar of Conferences

September 14-16, 1995: Children's Law, Policy & Practice in Boston, MA. Contact National Association of Counsel for Children, 303/322-2260.

September 25-26, 1995: Instruction, Inclusion, and Technology Conference in Austin, TX. Contact Jamie Judd-Wall, Technology and Inclusion, P.O. Box 92109, Austin, TX 78709-2109; 512/280-7235.

September 25-26, 1995: 6th Annual Emphasis on Technology Conference Hosted by Educational Resources in Rosemont, Illinois. Contact Educational Resources, 1550 Executive Drive, Elgin, IL 60123.

October 12-14, 1995: Discovery '95: Low Vision Conference in Chicago, IL. Contact DORS 217/782-2093; 217/782-5734 (TTY).

October 19-21, 1995: Closing The Gap Conference in Minneapolis, MN. Contact CTG, P.O. Box 68, Henderson, MN 56044.

October 25-27, 1995: Ninth Annual Technology + Learning Conference, INFORUM, in Atlanta, GA. Contact NSBA, 703/838-6722.

November 2-4, 1995: Diversity in Early Childhood: Broadening Realities, Valuing Diversity: 11th Annual International Early Childhood Conference on Children with Special Needs in Orlando, FL. Contact DEC, 3 Church Circle, Suite 194, Annapolis, MD 21401.

November 2-4, 1995: Pathways & Perspectives for Life and Learning in St. Paul, MN. Contact Learning Disabilities of Minnesota, 612/222-2696.

November 30-December 3, 1995: Fourth International Conference on Telecommunications in Education in Ft. Lauderdale, FL. Contact ISTE, 1787 Agate Street, Eugene, OR 97403.

December 7-10, 1995: 1995 ASHA Convention in Orlando, FL. Call 301/897-7348.

January 11-13, 1996: 13th Annual International TAM Conference on Special Education and Technology in Austin, TX. Contact Dave Edyburn, 414/229-4821.

January 25-26, 1996: 5th Symposium on Literacy and Developmental Disabilities in Research Triangle Park, NC. Contact Stephanie Whitmore, 919/966-7486 or fax 919/966-3864.

February 15-17, 1996: Florida Assistive Technology Impact Conference in Orlando, FL. Contact Jeffrey Fitterman, 813/872-5281.

March 14-15, 1996: ACTT VII Early Childhood and Technology Conference in Macomb, IL. Contact 309/298-1634.

March 17-20, 1996: 13th International Conference on Technology and Education in New Orleans, LA. Call 817/534-1220 or fax 817/534-0096.

March 19-23, 1996: Technology & Persons with Disabilities in Los Angeles, CA. Contact Center on Disabilities, 818/885-2578.

ACTTive Technology Subscription Form

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Agency ______________________________

Street Address ______________________________

City ____________________ State __________ Zip __________

For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
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AFFORDABLE PRINTERS FOR CLASSROOM AND HOME USE

by Julie Irish

Printers vary in terms of the technology employed, the features offered, speed, output quality, and (last but not least) price. Choosing the correct printer for the classroom or home depends entirely on the end application for which it is needed; for example, not all printers are capable of printing graphics, printing in color, or printing "letter quality" text. A basic understanding of how the various printers work can help determine which printers will support the features necessary to meet any specific need except for pricing.

Three types of printers are character printers, line printers, and page printers. Character printers print a document one character at a time; they are generally the slowest and emit the most noise due to the machinery and the number of repetitive actions. The dot-matrix printer and the "daisywheel" printer are the two major types of character printers. Line printers are faster than character printers, printing an entire line in one movement, and are often used in industrial applications in which large volumes of print are being produced. Because of the size, cost, and noise they are not practical for classroom or home use. Page printers work by printing an entire page in one motion. The print is transferred electronically to the paper instead of the print head beating the platen, thus this type of printer is known as a nonimpact or laser printer.

Dot Matrix Printers

In a dot matrix printer, a moving print head skates along the platen of the printer, imprinting the image of a letter through an inked ribbon. The image of the letter is then transferred to the paper wound around the platen. This printer has one moving element and the letters are formed by a number of wires or pins embedded in the print head. As the printer receives the signal from the software to form a particular letter, a certain combination of the wires will extend from the print head to make the impression against the ribbon. To save time wasted in waiting for the carriage return the head works in a bi-directional mode: it prints left to right across the page, and then prints the following line right to left on its return trip.

The dot matrix printer generally prints at speeds of 50 characters or more per second and each letter is made up of a matrix of closely spaced dots (the imprints of the wire ends or pins). The closer the dots are to each other the sharper the image of the letter. Dot matrix printers are manufactured as 9-pin to 24- and 36-pin models and are priced accordingly. They provide "draft quality" printing at a low cost and the option to use continuous-form printer paper. This makes them particularly useful for applications that print out long reports or other documents that do not have to be of "letter quality."

A popular example of an affordable dot matrix printer is the ImageWriter II which prints both graphics and text and

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Technology Assessment Process Training Now Available from Macomb Projects

Project TTAP (Technology Team Assessment Process), an Early Education Program for Children with Disabilities funded project, has recently begun its second year of outreach training. TTAP's team-based assessment procedures are designed to determine appropriate assistive technology applications for children and have widespread benefits including

- foundation for using technology to equalize a child's opportunities;
- suggestions for incorporating assistive technology into IFSP or IEP goals;
- justification of equipment purchases;
- information to families, early intervention personnel and agencies about appropriate technology applications for an individual child.

TTAP training and workshops are available throughout the year. For a free brochure contact Linda Robinson, TTAP Coordinator, Western Illinois University, 27 Horrabin Hall, Macomb, IL 61455; 309/298-1635; fax 309/298-2305.

EC 306030

From The Editors. . .

by Linda Robinson

Imagine for a moment that you are a four-year-old who attends preschool and you've just been told it is your turn to play on the new Macintosh computer with one of your classmates. If you are like most children in that age group, you probably feel excited and very anxious to play with the computer and explore what it has to offer. This reaction seems to be common during the preschool years.

Now think back to your first computer experience as an adult. Did you feel that same joy and excitement? Again, if you are like most adults, your answer is probably "no." When did we lose that sense of exploration and excitement for something new? Think of how technology sophisticated you could be today if you approached the computer with that same high level of eagerness as preschoolers do. They have no fear of failure; instead, they are driven by an excitement to learn.

The reality is that most adults are reluctant to learn how to use computers. However, another reality is that those who do learn and who integrate technology into their programs genuinely enjoy the computer. A commitment to learn is needed. Once that commitment is made, the creative technology ideas begin. And those adults can then approach a new computer or new software with that preschool eagerness to explore.

So what does the commitment take? And how do you find out more? It does take one valuable possession of each of us—time. Once the initial commitment is made, learning gets easier and, as a result, a lot more fun as time goes on. Of course, since we are talking about a field which upgrades products daily, this time commitment is a continuous thing. Our staff spend a portion of their time reading about new developments and exploring and experimenting with new equipment and programs. Even though this is part of our jobs, we do find time very limiting for learning everything, so we rely on one another for information.

Fortunately with today's technology, equipment and software seem to becoming more and more "user friendly," so that a minimum of time is needed to figure out a new program or piece of equipment. Printers are a good example of this. Our cover story explains the differences with printers, including their ease of operation. Some printers don't even have to be turned on or off; the computer does that for you. Again this simple function saves you time in learning a number of printer procedures. However, there are some tips to keep in mind for moving equipment, especially printers. We have included an article which provides pointers for moving equipment.

Telecommunications is another way to save time and to get information instantly. We have provided information on new services which may be helpful to you. Software companies now provide e-mail addresses for communication and information access.

If you haven't taken the time to learn the technology to your satisfaction or if you aren't convinced that you will ever approach the computer with positive excitement, then join us for the ACTT VII Conference in March. Every year we convert computer novices into "techies." In fact, some of those people offer to give presentations at future conferences. Our conference generates a technology fever that is highly contagious and will remind you of your preschoolers' computer excitement. Make that time commitment now and you will be guarenteed a time well spent.

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Subscriptions are $16 per year

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supports color printing in six colors plus black. Retail price of the ImageWriter II is $388.00.

Daisywheel Printer

The daisywheel printer's print wheel is generally a disk-shaped element with each character extending from the apex on a long spoke. The element moves along the platen and rotates to the correct character to be printed. Then a hammer extends from the print head and presses the letter against a ribbon, transferring the image of the character to the paper.

The daisywheel printer makes much more noise than the dot matrix printer, is slower because of all the physical movement—15 to 20 characters per second—and is more costly. It lacks flexibility in printing though, producing only text file printouts and relying on the character set engraved on the printing mechanism. Additional wheels can be purchased to change the fonts. An advantage of the "daisywheel" printer is its "letter quality" print. It also accepts continuous-feed paper, though most are single-sheet printers and are used for letters and final drafts.

Daisywheel printers are slightly more expensive than dot matrix printers and are priced according to the size of the carriage—the larger the carriage the more expensive the printer.

Ink Jet Printers

A relatively new innovation in character printers which is replacing both dot matrix and daisywheel printers as an economical, quieter alternative is the ink jet printer. The ink jet printer works by shooting a spray of ink through a nozzle in the moving print head directly onto the paper. It uses refillable ink cartridges.

Ink jet printers have the flexibility of printing in color and in any number of fonts and graphic formats. Because the spray of ink is so fine and precise, the shape of the letters is even more exact than that of the dot matrix—"near letter quality"—but take care when using water-soluble ink that the document does not get wet and the ink run. Using permanent ink can remedy this problem and a photocopy of a document using the water-soluble ink can provide a permanent copy. There are so few moving parts, these machines make almost no noise.

The biggest disadvantage of the ink jet printer is the higher cost. Prices vary depending on the speed of the printer, whether they are character or page printers, or if they print in color. The following is a list of ink jet printers and their approximate costs.

Apple Color StyleWriter Pro — $595
Apple Color StyleWriter 2400 — $449
Apple StyleWriter 1200 — $269
Apple StyleWriter II — $219
Hewlett Packard DeskWriter — $219
Hewlett Packard 540 — $280
Hewlett 560C Color Printer — $456

Laser Printers

The technology of nonimpact printers, such as laser printers, is very similar to that of modern photocopy machines. The software sends the image of a page to the printer, and this image is transferred to a magnetically charged rotating drum within the printer. Particles of negatively charged toner (a fine dry powder that is used instead of ink) stick to the positively charged magnetic "image" on the drum. The drum rotates as a sheet of paper passes under it, transferring the toner from the drum to the paper. In a final step, the toner is affixed to the paper with heat via a small laser beam.

With laser printers it is possible to print both graphics and text on the same page and do so in "near letter quality." The characters are formed

continued on page 4

Project Findings Show Technology Has Positive Effect on Literacy

The Early Childhood Emergent Literacy Technology Project, funded by the U.S. Department of Education's Technology, Media, and Educational Materials for Individuals with Disabilities Program, has spent the past year researching the effects of its Interactive Technology Literacy Curriculum (ITLC) on preschool children with disabilities in 3 area classrooms. One classroom had no prior experience with technology; one had only one year of experience; the third had used technology for more than one year.

Findings at the end of the emergent literacy project's first year indicate that technology has a positive impact on children's literacy. Two measures were used at both the beginning and end of the school year, the Emergent Literacy Assessment (ELA) and the Behavior Interaction Tool (BIT). Both the ELA and BIT gain scores were significantly different at a very high level. There was also a significant linear trend based on the number of years each classroom had access to technology: the greater the classroom exposure to technology, the greater the gain in literacy over a year's time. Since all students in the three groups were tested at the end of only one school year, these large differences were in no way related to students' maturation, but rather to the number of years the classrooms had exposure to technology.

The project will continue research and curriculum development for two more years. The ITLC is based on interactive commercial software, graphics software, and software developed by the preschool children and their teachers using **HyperStudio**.

Brightly-Colored Kid Keys Provide Easy Keyboard Access for Young Children

Graystone Digital has designed Kid Keys Keyboard, an educational keyboard specially designed to give children the most out of their first computer experiences. The keyboard can also be used with children who have cognitive delays, learning disabilities, and physical disabilities where a reduced number of keys would help the user be more comfortable and effective at the computer.

The keyboard has large, 1" square keys. The spacebar and return key are even larger. Letter keys are brightly colored, vowels in bright yellow, and other keys in white, blue, red, and green. Letter keys are also in alphabetical order. Number keys are set apart from letter keys. Off to the right side, are 4 large, brightly colored directional keys. Above them are smaller function keys for caps lock, delete, tab, command, and others so users have access to some higher-level functions. All the keys have a clear, tactile downward press and release, just like a standard keyboard.

Kids Keys uses the regular Mac keyboard connection port (ADB) so it is a snap to install. It works with all regular Macintosh software and the mouse can be attached to it.

Available from Don Johnston Incorporated, Kid Keys for the Mac sells for $139.00. It is also available for IBM at $119.00. Call 800/999-4660 for ordering information.

Printers **continued from page 3**

with a matrix of closely spaced dots. The type density of most commonly used laser printers is 300 dots per inch (DPI) but they can produce up to 1200 DPI for significantly more money. High or low resolution is defined by the DPI—the more dots per inch the higher the resolution and the sharper the image. Laser printers are bin-style single-sheet feed only but once the hopper is filled, the machine can be left unattended for long print jobs. The printing speed depends on the capacity of the machine and the number of font changes or graphics in a document, but it will yield between 4 and 8 pages per minute. The cost per page is lower for laser printers; however, the initial investment in the printer and supplies is greater than for other machines. Another disadvantage is that laser printers are most sensitive as to which types of paper can be used. The heat of the laser will melt the resin on paper that has been thermographed and cause the plastic to stick to the rotating drum. It also causes labels to work free from their backing and to adhere to the drum, making it impossible to print.

Any work that must be of high print quality should be printed on the daisywheel, ink jet, or laser printer. If both print quality and speed are important, the laser printer is the best selection. The following is a list of Apple laser printers, but there are various other brand names which are comparable in price and capabilities.

LaserWriter 16/600 PS — $2298
LaserWriter Select 360 — $1289
Personal LaserWriter 320 — $895
Personal LaserWriter 300 — $563
Apple Personal LaserWriter — $629

Most printers accept paper weighing between 16 and 24 pounds, 20 pound being the recommended weight and cotton bond being the best choice for content. Variations in paper composition may significantly affect print quality, but for general applications, most plain paper manufactured for high-quality photocopying works well. Plain paper almost always has one side better for printing and is marked with an arrow on the end of the package. Take care to load the paper correctly. As a rule, the heavier paper and smoother surfaces print clearer, sharper images; colors appear more vibrant and richer on premium coated paper. Very smooth or shiny surfaces and highly textured paper may not print so well; therefore, it is best to test the print quality before making a final copy of any important document.

Keep in mind that the printer's ability to perform an application is contingent upon the machine and the software which runs it. Numerous printers are available in today's market, and costs vary depending on where the printer is purchased. As printer technology is perfected, prices are decreasing, making more advanced technology available and affordable in the home and classroom.

Some resources for purchasing your printer include:
Apple Computer Inc.
Education Customer Support MS 198-ED
2420 Ridgepoint Drive
Austin, TX 78754
800/800-APPL (2775)

Educational Resources
1550 Executive Drive
Elgin, IL 60123-9330
800/624-2926

Mac Mall
2645 Maricopa Street
Torrance, CA 90503-5144
800/222-2808

Mac Warehouse
P.O. Box 3013
1720 Oak Street
Lakewood, NJ 08701-3013
800/622-6222

Assistive Technology—Is Its Function Medical or Educational?

The following information appeared in the September/October 1995 issue of TECHTALK, a publication of the Illinois Assistive Technology Project. It is reprinted here with permission.

If an assistive technology device is needed for a child to have a free appropriate public education, the school district is responsible for seeing that the device is available and maintained. The exception is if the device is labeled "medical." But just how does one determine if the device is medical or educational? This question has been debated throughout the country. In an effort to help both school districts and parents resolve the issue, The Missouri Assistive Technology Project developed a list of questions below to help determine if a device is medical or educational in its purpose and use.

Expertise Required

What is the level of expertise required to deliver the device or service? If a medical doctor delivers the assistive technology, it is more likely to be considered medical than if delivered by non-M.D. professionals.

Intrusiveness

What is the level of intrusiveness of the device or service? The more intrusive, the more likely it is to be considered medical. Surgically implanted devices would be examples of ones that are very physically intrusive and that would likely be excluded as medical.

Delivery Environment

In what environment is the device/service delivered? If it can only be delivered in a hospital, it is more apt to be determined medical than if it can be delivered at home or school or other settings.

Prescriptiveness

How prescriptive is the device or service to the person? The more specific the prescription, the more likely it is to be medical, versus a recommendation for a device or service that is less specific.

Purpose

Is the device or service required to sustain life or needed to attain developmental or educational goals? The more life sustaining, the more likely the assistive technology is to be determined medical.

Elimination of Disability

Does the assistive technology correct the limitation or does it compensate for and/or diminish the limitation? The more the device/service corrects the disability, the more likely it is to be determined medical. Assistive technology that does not correct limitations but rather compensates for or augments the attainment of developmental or educational goals would likely be deemed educational.

Come to ACTT VII

Watch Lynne Rocklage, Keynote Presenter, demonstrate wonderful ideas for creating low-cost (or no-cost) low-end assistive technology.

Register *today* for super savings!

The registration form is on page 12.

COMING SOON...

Good Junk + Creativity = Great Low-End Technology!

A book for the design and creation of low-end technology devices and strategies using "left over stuff" and "good junk"

Authors:
Lynne A. Rocklage, Ph.D.;
LeaAnn Peschong, M.S., SLP-CCC;
Amy L. Gillett, Ph.D.;
Barbara J. Delohery, M.Ed.

Publication Date:
January 1, 1996

To reserve a copy of "Good Junk," send your name, address, and phone number to Lynne Rocklage, 1002 W. Cross, Ypsilanti, MI 48197.

NICHCY on the Internet

Getting information on disabilities and disability issues has never been easier. Just surf the 'net to NICHCY's door and download NICHCY factsheets, general resource sheets, parent guides, News Digests, and other publications you need—today! There's no telephoning, no cost, and no waiting!

NICHCY's Internet Address is gopher aed.org

You may also write to NICHCY for information at P.O. Box 1492, Washington, DC 20013. Ask for the NICHCY News Digest called *Planning for Inclusion* or for the technical assistance guide *Operating a Local Information & Referral Center.*

Software Focuses on Independent Living

Independent Living Activities, HyperMedia Stacks for the Macintosh, were created by Computer Options for the Exceptional to provide highly functional, inexpensive computer applications for children and adults with moderate to severe developmental disabilties.

Ten HyperStudio-created programs incorporate crisp, clear speech and sound effects, colorful computer graphics, and realistic digitized photographs. Activities of daily living addressed in the programs include Dial the Phone, Dress, Find What's Missing, Grocery Shop, Identify Money, Read A Clock, Order at McDonalds, Read Community Signs, and Read Functional Words.

Macintosh System requirements include 4 Meg RAM, System 7.0 or higher, 256-color monitor, and appropriate hard drive space (programs require from 2.0 MB for Identify Money to 6.0 MB for Grocery Shop).

Programs more appropriate for 4 - 6 year olds might include Dress (3.5MB), Find What's Needed (4.0MB), and Identify Sounds (4.0MB).

Each program costs $30. Contact Computer Options for the Exceptional, 49 Overlook Road, Poughkeepsie, NY 12603; 914/452-1850.

Videotape Helps Beginning Macintosh Users

The Macintosh—Where to Begin? is a 30 minute videotape from Macomb Projects created as part of the Technology Inservice Project's training efforts. Designed with novice computer users in mind, the video takes its viewers step-by-step through the plug and play moments of new computer use: setting it up, turning it on, and using it.

Order from Macomb Projects, 27 Horrabin Hall, WIU, Macomb, IL 61455. Price is $40.00.

Interactive Adventures with Pippi

Astrid Lindgren's well-loved character, Pippi Longstocking, has been wonderfully captured on **Pippi**, an interactive CD-ROM published by Ahead Media AB and distributed by Don Johnston, Inc. ($80.00).

Children can listen to Pippi stories in several languages: English, Spanish, Swedish, Dutch, French, or Japanese, or can interact with the activities in the stories. Text can be displayed on-screen or omitted.

The software meets a variety of needs. Auditory cues, speech, sounds, and graphics help focus children on the tasks at hand. Switch options allow for simple switch input (one switch activation will repeat an action) or two switch input (each switch causes a different action). Single-switch access is built in. The software is also accessible with a mouse or TouchWindow.

The user can go forward or backward to any page of the story at any time, and activities within each story are easily selected. Exploring and discovering are fun—each room contains hidden games, surprises, and puzzles.

Pippi requires a Macintosh LC or higher, System 7.0 or higher, with a color monitor and CD-ROM drive, and 2.5 MB RAM. Macintosh switch interface, switch, TouchWindow, Ke:nx are recommended for alternate access.

Contact Don Johnston, Inc. at 800/999-4660 for more information.

Colorful Switches, Cables

Don Johnston's BASS (Big-Area Single Switches) feature a large colorful surface measuring 6" x 3 3/4" x 1". The switches come in red, green, blue, yellow, black, or white and sell for $48.00 each. When pressed, BASS switches give a clear, crisp auditory click for feedback. They can be activated with 3-5 oz. of pressure. Mounting options include Head Mounting Kit, Slim Armstrong, Universal Switch Mount, or Dual Lock.

You might also consider Don Johnston's colorful assortment of four cables for switches. The cables come in red, green, yellow, and blue and can be used for matching to switches or to tasks. The set of 4 color cables sells for $15. Call 800/999-4660 for more information or to order either product.

Updated NARIC Disabilities Directory Available

The 1994-95 Directory of National Information Sources on Disabilities is available from the National Rehabilitation Information Center (NARIC) for $15. A "who's who" of resources in the rehabilitation field, the directory is described as an "essential and indispensible tool for anyone interested in disability." Resources are available for assistive technology, developmental disabilities, federal agencies, special education, employment, sensory impairments, legislation, rare disorders, sports and recreation, rehabilitiation research, and accessibility.

Order from NARIC, 8455 Colesville Road, #935, Silver Spring, MD 20910-3319. Fax orders to 301/587-1967. You may use a purchase order or request that they bill you.

PACKING AND MOVING COMPUTER EQUIPMENT

by Carol Schneider

Teachers often take their classroom computers and printers home during holidays and breaks to give themselves time to catch up on school and personal work.

If equipment is moved a long distance, from one building to another, or from school to a home, a computer and/or printer traveling case should be used to protect the equipment. Computer cases can be purchased from computer suppliers or, if you cannot find a case that fits your computer, check into having a case custom made at your local upholstery store. The orginal packing boxes can also be saved and used for moving the equipment.

Here are some tips for making equipment moves go more smoothly.

- Turn off the computer.
- Label all cords from the computer system before disconnecting them. This will assist you when assembling the computer again.
- Unplug the computer system.
- Disconnect the monitor cord from the computer.
- Disconnect the keyboard from the CPU (Central Processing Unit).
- Place the CPU in the computer case.
- If your computer case is large enough for your whole system, place the monitor on top of the CPU. Place extra packaging material (foam) in front of the monitor's screen.
- Place keyboard and cords in the computer case.
- Close the case.
- Or repack the computer system in its original packing materials.

Whether you pack your computer in a case or in its original box, be sure to transport it carefully.

If you are moving an ink jet printer the following tips may be helpful.

- Turn off the printer.
- Open the printer cover and remove all ink cartridges, setting them aside on a piece of paper.
- Place a piece of tape on each opening of the ink cartridges.
- Wrap each ink cartridge separately in plastic wrap and store them all in a plastic bag. (If the ink has not spilled from the cartridge case when they reach their destination, you can put them back into the printer. If ink has spilled, do not put the cartridges back into the printer.)
- Close the printer cover.
- Turn on the printer.
- Super clean the print head. See your documentation. You will see an error message because the ink cartridges aren't installed. Click Cancel.
- Turn off the printer again.
- Remove any paper from the sheet feeder.
- Remove the power cord and printer cable.
- Push the paper support and paper tray back inside the printer.
- Repack the printer in its original packing materials or printer case.[1]

If the ink cartridge does spill onto the print head or interior, use a dry cloth or Q-tips to clean the interior. Do not use any liquid cleaners inside the printer.

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[1] Apple Color StyleWriter Pro User's Guide (1994). Cupertino, CA: Apple Computer, Inc. pp. 65-66.

New Address

Illinois Assistive Technology
Project (IATP)
528 South Fifth Street, Suite 100
Springfield, IL 62701
217/522-7985 • 800/524-1030

OVERLAY SETS FROM INTELLITOOLS OFFER "INSTANT ACCESS"

IntelliTools has a number of new overlay sets you may want to consider for your early childhood classroom. Living Books Instant Access Overlay Set #3 sells for $25.00. It provides complete access to the latest Living Books: **The Berenstain Bears Get in a Fight**, **Dr. Seuss's ABC**, and **Ruff's Bone**. With the overlays, children can explore independently using IntelliKeys or a switch instead of a mouse. The set includes an installation disk and three overlays: Cause and Effect, Directional Scanning, or Automatic Scanning. IntelliKeys is required for overlay use.

Overlay Set #3 joins Living Books Instant Access Overlay Sets #1 and #2. Set #1 includes overlays for **Just Grandma and Me**, **Arthur's Teacher Trouble**, **The New Kid on the Block**, and **The Tortoise and the Hare**. Set #2 overlays are for **Harry and the Haunted House**, **Little Monster at School**, and **Arthur's Birthday**.

A second new overlay set is Thinkin' Things Collection 2 - Instant Access Overlays ($25.00). Overlays are included for Toony's Tunes, Frippletration, Oranga Banga's Band, and more.

IntelliTools also sells overlays for **Thinkin' Things Collection 1**, **Millie's Math House**, **Bailey's Book House**, and **Sammy's Science House**. **ClickIt!** technology is built into each set of Instant Access Overlays. You can purchase all four of these sets in a bundle for $75.00 plus $4.00 shipping. Otherwise, all overlay sets are $25.00 plus $4.00 shipping. The software is sold separately.

System requirements for all Instant Access Overlays are a Mac LC or higher with a CD-ROM drive, 4 MB, 8-bit color (256 colors).

Supporting Classroom Diversity

A Touch of the Pacific Northwest

by Letha Clark

ACTTive Technology provides this column as a regular feature for helping teachers use technology to expand their curricula to include cultural awareness and diversity.

Oral legends passed down for generations may become the focus of a software program. **The Legends of Raven** with roots in the Pacific Northwest, is a tale of the Native Americans from Oregon, Washington, Canada, and Alaska. Raven has both the best and worst characteristics found in humans. He can be generous and selfish, humble and boastful, wise and foolish. The values, central to the beliefs of the culture demonstrated in this tale are: love children, respect others, and take only what is needed.

The Story Maker option from the menu offers several scenes with which to develop a new story. Graphics can be added using the cast of characters provided. Text can be easily included on each page. This program is a natural way to introduce the culture of the Pacific Northwest to children. The control they have over the objects and text assures the publication of a ***New* The Legends of Raven**.

The Legends of Raven is an Explore-a Folktale, published by William K. Bradford (800-421-2009) and is available in Macintosh, DOS and Apple II formats. All versions are $75.00.

BRØDERBUND ONLINE

To receive technical support, to learn about Brøderbund School Editions, to order products, to download lesson plans, or to trade ideas with other teachers, dial up Brøderbund Software Online.

America Online®: Use the key word "Broderbund" and you will find a special section called "Educators." Explore each area to learn more about the variety of educator software and resources available. If you need technical support, click the icon "Messages." You can post your questions on the message board and expect to receive an answer within 48 hours. Be sure to review FAQs (Frequently Asked Questions) for answers to the most commonly asked technical questions.

Brøderbund Bulleltin Board: 415/883-5889. Dial Brøderbund directly and get the same information and technical support. There's even an online store.

Brøderbund Web Page: http://www.broderbund.com

Compuserve: Use Go BBforum for the main "Broderbund" area. This is where you find technical support and news about the latest products. To shop the Brøderbund store in the electronic mall, type Go BB.

Microsoft Network: Use the find word "Broderbund"

Uncover the Secrets of Your Macintosh

What can you buy for $14.00? Three boxes of cereal. Dinner for your family at the local fast food "restaurant?"

How about a $14.00 investment tha will help you understand and use your Macintosh better? **The Wizardry of Your Mac** contains plenty of tips and shortcuts to help you get the most from your computer.

Order the **Wizardry of Your Mac** from Macomb Projects. Mail your purchase order to 27 Horrabin Hall, WIU, Macomb, IL 61455. Call 309/298-1634 or fax 309/298-2305 to request a copy of Macomb Project's 1995-96 catalog.

PROGRAM CONTAINS ILLUSTRATIONS FOR COMMUNICATION BOARDS

If you need to make a communication board for a child, Pick 'n Stick on Disk from Imaginart Software may be just what you need. The program contains 2860 illustrations for making communication boards. 1430 color images and 1430 black and white images are provided on 3.5" high density disks. Images are provided in PICT format for the Macintosh and in TIFF for the PC. Subjects include people, feelings, food, clothing, household items, common activities, common items, and occupations.

The program includes instructions for manipulating images and designing communication boards in several popular programs. Designed to be easily imported into major word processing, publishing, and draw/paint programs, it allows you to make the images larger or smaller and to change colors. You may also type in words or phrases in any language to describe the image.

Available from Innocomp, Suite 302, 26210 Emery Road, Warrensville Heights, OH 44128, the program sells for $199.00 for either the Macintosh or PC versions. Call 800/382-8622 for ordering information.

The newest member of the AbleNet switch family is the Specs Switch. Like other AbleNet switches, it is reliable, sensitive, and durabile. This little switch (only 1 3/8" in diameter) comes with three bases—a flange base, a flush base, and a strap-adaptable base. It is available in seven colors, priced at $42 each. Call AbleNet at 800/322-0956 for more information.

Software Review

Mixed Up Mother Goose Deluxe

by Letha Clark

Several years ago, before the slip-sliding of the Apple computer, Sierra developed a terrific software program called **Mixed-Up Mother Goose**. It moved pretty slow and the graphics were typical of the time, but it was still a good program with a lot of potential. Since the Macintosh computer has become more and more popular in schools and early childhood classrooms, those of us who liked **Mixed-Up Mother Goose** have been waiting impatiently for the release of a Macintosh version. Well, FINALLY, it is here—**Mixed Up Mother Goose Deluxe**!

In September, the new release hit the market, and it is at least as good as anticipated. The characters move along at a pace determined by the user; the graphics are wonderful, and the sound is excellent.

As the title indicates, the Mother Goose rhymes are mixed up. Jack and Jill's pail is lost. The cow has postponed her jump over the moon because the cat misplaced the fiddle! Eighteen of those famous Mother Goose folks have lost important parts of their rhymes and are waiting for help.

When a game begins, all 18 of the missing pieces will be in different places. As the pieces of the rhymes are found and returned to their rightful owners, a jazzed up version of the traditional rhyme is sung.

If a game is started and not finished (and that is a real possibility), it is saved when play is stopped. The next time a child returns to the computer to help Mother Goose, she can resume playing where she left off: all the found pieces remain found; all the missing pieces are right where they were when play last ended.

The prerequisite for this program would be a familiarity with Mother Goose ryhmes and no small amount of patience—it takes time to fix all the mixed up rhymes. While the program is not difficult to use, only the savviest three year old could navigate through it. Advertised for three to six year olds, it is better suited for children four to eight.

Mixed-Up Mother Goose Deluxe is available on Macintosh CD-ROM for $36.95 from Educational Resources. The 3.5" IBM version is $19.95. Call 800/624-2926 or 708/888-8300.

Easter Seal Video Promotes Inclusion

Diversity Equals Inclusion is a 12 minute videotape from the National Easter Seal Society that highlights contributions people with disabilities are making in schools, communities, and workplaces.

The video focuses on three themes

- the most common definition of diversity as people with multicultural, ethnic, and religious backgrounds needs to be expanded to people with disabilities;
- inclusion means increased productivity because it allows everyone to participate;
- to make inclusion happen, attitudes must change.

The video shows schools struggling with inclusion issues how inclusion can work when communities set priorities.

Order the video for $50 from the National Easter Seal Society, 230 West Monroe, Suite 1800, Chicago, IL 60606. Call 312/726-6200 for further information about the video's content.

Early Childhood Software Available on CD-ROMs for PCs

Knowledge Adventure has numerous CD-ROMs available for young children. Unless otherwise noted, these programs are for PCs.

My First Encyclopedia allows children ages 3-6 to explore a tree and discover 10 key areas of learning, such as Space, Geography, Art, and Music. The encyclopedia has over 575 entries, 185 animations, hours of original music, games, and a paint program. $32.95

JumpStart Kindergarten for ages 4-6 contains dozens of fun, interactive games and puzzles. Animated characters are guides for the activities. $32.95.

Undersea Adventure has point and click exploration of hundreds of videos, articles, and pictures of ocean life. The CD-ROM includes a mouse-driven virtual aquarium, a treasure hunt game, and an exploration of the inside of a lobster, shark, and other sea creatures. This one is also available for the Macintosh. $29.95.

3-D Dinosaur Adventure takes 3 - 10 year olds on a dinosaur theme park adventure featuring over 25 full-color videos, a 3-D museum, and a race through a maze. Available also for the Macintosh. $$29.95.

Bug Adventure for 3-8 year olds allows children to explore the fascinating world of insects through videos, photos, games, animation, and narration. There's a Talking Storybook included for for pre-readers. $29.95.

Contact Knowledge Adventure at 818/542-4200 or 800/542-4240 for ordering information.

Interested in technology assessment training, presentations, or workshops?

Call Linda Robinson at 309/298-1634
or fax 309/298-2305.

Public Domain Software for Your Macintosh

Technology for Language and Learning announces the availability of MacPac I, its new collection of quality public domain software/shareware for special education. MacPac I contains seven disks of over 70 programs. Each disk contains a text file with highlights and instructions. The programs all require System 7.0 (or higher) and will run on an LC (or higher) computer. All programs that work with the mouse will work with the TouchWindow, and games can easily be adapted to work with a single switch for cooperative play.

Main categories included are

•Early Learning: errorless, exploratory play, cause/effect, mouse training

•Education: letters, numbers, shapes, colors, math, science, reading, language

•Games: action games of varying levels, word games, concentration, hangman

•Utilities: speech & sound utilities, icons & icon maker, WindowShade, CNSay

•Extensions: BigFoot, Eyeballs, Randomizer, Screen Saver

•Control Panels: menu-bar clock/calendar, virus detection programs

•Fonts, Sounds, Graphics: Bonk!, Creak!, Cartoon & Cursive fonts, holiday icons

•Bonus: "Oscar the Grouch" sings "I Love Trash" when trash is emptied

The entire collection sells for $75.00 plus $4.50 for shipping. A complete catalog of public domain/shareware software for Macintosh, Apple IIe, and Apple IIGS is available for $10 from Technology for Language and Learning. P.O. Box 327, East Rockway, NY 11518-0327; 516/625-4550.

Handbook Describes Switches and Augmentative Communication Devices

The Handbook of Adaptive Switches and Augmentative Communication Devices by Cindy George and Warren Lacefield is a sourcebook for assistive technology specialists, teachers, therapists,and others responsible for selecting communications devices and switches for persons with disabilities.

The **Handbook** provides comprehensive practical and technical information pertinent to device selection for a wide variety of commercially-available switches and augcom devices. It contains descriptions; pictures; laboratory test data on switch activation and release pressures, travel distances, and compliance; and other functional information to help in the selection of the most applicable pressure switch and augmentative device for a particular person.

The **Handbook** is organized and bound in a three-ring binder for easy updating. Update inserts will be announced as new materials become available for inclusion in the book.

The $45.00 book is available from Academic Software, Inc. Phone 606/233-2332 or write 331 West Second Street, Lexington, KY 40507 to request a catalog.

Video Demonstrates Use of Tangible Symbol Systems

Developed as part of a USDE funded project, Demonstrating the Benefits of Tangible Symbol Systems: An Innovative Use of "Low-Tech" Materials for Students with Severe and Multiple Disabilities, **Tangible Symbol Systems** videotape illustrates the success of the tangible symbol system with children with deaf-blindness and severe cognitive limitations. The tape includes five case studies, a description of the systematic approach to instruction, and commentary by teachers and parents.

Continued research on the tangible symbol system has demonstrated that in every case, children who learn to use tangible symbols have, through access to a communication system that is meaningful to them and their communication partners, increased their control over the social environment.

For more information about the system or the video, write Charity Rowland, Washington State University-Vancouver, 1818 S.E. Division Street, Portland, OR 97202.

Software Teaches Scanning Skills

Scan It - Switch It, software for children ages 3 and up from the UCLA Microcomputer Project, helps teach horizontal and vertical scanning using a single switch,the spacebar, or a TouchWindow. Instruction progresses through five levels of difficulty, from "capturing" a single object with a moving box to using scanning to select matching items. You may select from 1 to 10 items, including a bunny, dog, fish, truck, car, wheelchair, ball, cup, spoon, brush, toothbrush, and bowl. Box options include 1) orientation (horizontal or vertical), 2) number (large or small), and 3) number (from 1 to 3). Other options to set are number of errors before a cue is given, number of correct answers to end a game, players names, and record keeping.

The Macintosh program requires a color monitor and sells for $45. A version for the IIGS is also available for the same price. Order from UCLA Microcomputer Project, 1000 Veteran Avenue, Room 23-10, Los Angeles, CA 90024; 310/825-4821.

The ACTT VII Conference !!

What is the ACTT Conference?

The ACTT (Activating Children Through Technology) Conference is a small, informal technology conference which offers sessions and hands-on opportunities to learn about using computers and adaptive peripherals for young children with disabilities. The March 14-15, 1996 conference is the seventh annual assistive technology conference sponsored by various funded projects at Macomb Projects in Macomb, IL. The ACTT VII Conference is only one of a variety of services and training opportunities Macomb Projects makes available to parents, teachers, and other professionals who work with children age birth through eight with disabilities.

Who should attend ACTT VII?

ACTT VII is for anyone who desires assistive technology information and training. Teachers, parents, program assistants, school and program administrators, university professors, students, and State Part H and 619 coordinators have comprised the participant lists of past ACTT conferences. Everyone who wants to learn more about assistive technology applications for children ages birth through eight is welcome! However, registrations are limited. We keep the conference small to provide personal attention, hands-on opportunities with the equipment and software, and plenty of networking opportunities among participants.

What topics are covered?

Past conference sessions have featured ways to integrate technology into the early childhood classroom, creative curriculum activities, hands-on experiences with a variety of adaptive peripherals, preview labs for commercial and public domain software, opportunities to make switches, Ke:nx workshops, information on technology assessments, expressive arts and technology, augmentative communication, results of research on the barriers and benefits of assistive technology, previews of new products, and panels of parents and teachers.

Who are the presenters?

The core group of presenters is comprised of the staff of various projects belonging to Macomb Projects. These trainers, technology specialists, and early childhood specialists provide assistive technology training and technical assistance to teachers and families throughout the year. They have presented workshops and training sessions for schools and agencies across the country, as well as sessions at Closing the Gap, TAM, DEC, CEC, and other state and regional conferences. The 1996 Conference features Lynne Rocklage as the keynote speaker and presenter. Dr. Rocklage is well-known for her work with low-cost, low-end technology. The ACTT Conference also welcomes interested persons from other technology projects, agencies, or companies to apply for a presentation at ACTT VII. Presentation proposal forms are available by calling 309/298-1634 or faxing 309/298-2305. (ATTN: Joyce)

When and where will ACTT VII be held in 1996?

ACTT VII will be held on March 14 - 15, 1996 in Horrabin Hall on the Western Illinois University campus in Macomb, IL. The conference begins each day with a continental breakfast and opportunities for participants to meet informally. Most sessions last an hour and a half, but some hands-on sessions are 1/2 day sessions. The conference ends by 4:00 each day. Breakfasts, lunches, and sodas during breaks are included in the registration fee.

How can I be part of ACTT VII?

Just fill out the registration form on the reverse side and send it with your check or purchase order to ACTT VII, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455. If you have questions or would like to give a presentation, call 309/298-1634 and ask to speak with Joyce.

Where Do I Stay in Macomb?

The Macomb Inn (309/833-5511) is offering special conference rates. Mention the ACTT Conference when you call. Other lodging: AmeriHost (309/837-2220), Super 8 Motel (309/836-8888), The Pineapple Inn Bed and Breakfast (309/837-1914).

What presentations might the ACTT VII Conference offer?

"Something for everyone" has been the by-word for all our conference planning. Consider what was offered at last year's conference. Similar topics are being planned for ACTT VII.

The ACTT VI Conference featured the following presentations:

- Popular Preschool Programs: Great Software You and Your Students Will Love!
- The Joys of ClarisWorks: Making ClarisWorks Work for You
- Connect Young Children with Ke:nx
- Computers and Young Children: How Do We Fit the Pieces Together in the Classroom?
- Switch Construction Workshops
- Preview Lab: Macintosh Software
- HyperStudio: Creating Software Unique to Your Classroom
- Technology: An Intervention Tool for Inclusion
- Exploring ArtSpace
- Early Findings: Emergent Literacy and Technology
- Building Inclusion in the Early Childhood Classroom through Cultural Sensitivity and the Use of Assistive Technology
- The Wonders of Your Macintosh
- Technology Beginnings: Decisions and Dilemmas
- Assessing Technology Needs of Young Children
- About the InterNet
- The Basics of the Macintosh
- Multimedia for Educators
- Talking Books in the Classroom
- Babes in TechLand
- Plug and Play: Peripherals for the Macintosh
- Through Parents' Eyes: Technology Issues for Young Children

The ACTT VII Conference is being partially supported by Illinois STARNET Regions I & III, funded by the Illinois State Board of Education.

ACTT VII Registration

Name ___ Agency ___
Address ___ City ___ State ___ Zip ___
Phone where I can most easily be contacted (   ) ___

Registration fees include continental breakfasts, lunches, and sodas each day.

Regular Registration

___ $55 enclosed for the two-day conference
___ $35 enclosed for Thursday, March 14 only
___ $35 enclosed for Friday, March 15 only

Parents of young children (0-8) with disabilities

___ $35 enclosed for the two day conference
___ $20 enclosed for Thursday, March 14 only
___ $20 enclosed for Friday, March 15 only

___ **Check if you require special accommodations**

What accommodations are required? ___

Special Deals:

___ $45 enclosed for early registration (Must be postmarked by December 19, 1995)
___ $45 enclosed per person for Group Registration (four or more people from the same agency)
•Send All Group Registration Forms Together with Payment or Purchase Order

Registrations postmarked after March 1, 1996 are $65 for two days; $45 for one day.

Questions? Call 309/298-1634. Ask for Joyce

Your payment or purchase order must accompany registration. Phone registrations will not be accepted. Make checks and money orders payable to Macomb Projects (U.S. Funds only, please). Send payment and registration to ACTT VII Conference, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.

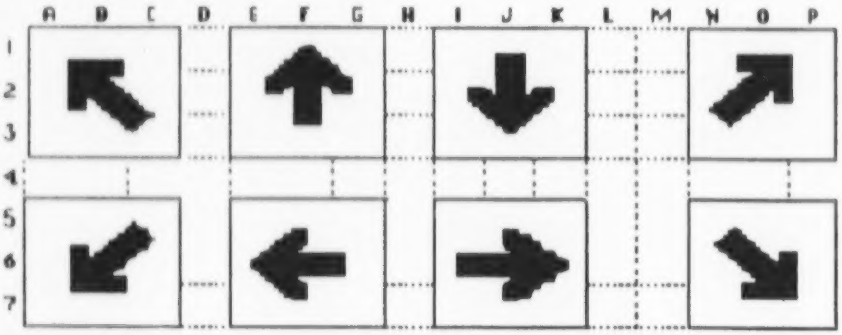
Thinkin' Things with Ke:nx

from Project ACTT staff members Carol Schneider and Linda Robinson

Materials

- Macintosh computer with color monitor
- **Thinkin' Things** (Edmark)
- Ke:nx (Don Johnston)
- Key Largo or Unicorn Expanded Keyboard
- Color Printer
- Clear Transparency
- Overhead Marker Pen
- Masking Tape

1. Place the clear transparency over the computer monitor and secure with masking tape.
2. Open **Thinkin' Things**. Select "Blocks in Motion" by double clicking on the box with the circle icons.
3. Explore the program. Please notice where you have to click and drag the mouse to operate the program.
4. Mark the selected direction with spots (8 hot spots — the places to which you drag the cursor to an object and click to activate an object) with the overhead marker pen. Markings could be designated with numbers, alphabet, or lines. Once you have marked the selected hot spots, close the program and open **Ke:nx Create** (Don Johnston) and select "Alternate Keyboard," and "New."
5. Set markers: Select **Set Marker** under the Edit menu or use **Open Apple M**. Place the marker where you want it on the screen, click, and name the marker with a letter. Work from left to right. Continue the procedures until all eight "hot spots" have been given a letter (a - h).
6. Define the overlay: Click and drag your mouse to define the size of the overlay squares. Select squares as shown in this example:



7. Double click on the upper left square. This will take you to your working menu and you will see:

User Sees:

Select icon from graphic library.

User Hears

Not applicable at this time.

Computer Receives: (for each selected hot spot)

<marker>a<click>

Select done, then continue in the same manner with each square. Continue with each hot spot b - h.

8. Save the setup and give it a name, "Directions."
9. Print the overlay. Or if you want to test the overlay before you print, you can do so.
10. Under the Ke:nx Menu load this setup. Attach a touch tablet to the Ke:nx box. Boot **Thinkin' Things**. Select the "Blocks in Motion."
11. Test the setup by randomly activating the "hot spots" or different arrows.

Voice Print Chip Makes Inexpensive Communication Devices Possible

The following article was adapted from Ten Dollar Tech, a regular feature in the Illinois Assistive Technology Project's publication TECHTALK. The information appeared in the September/October issue and is used here with permission of the Editor.

Ron Mriscin, a teacher at Jefferson Elementary in Vandalia, Illinois, had used the recordable Hallmark cards as communication devices for children in his classroom. When he recently learned that Hallmark is discontinuing these cards, he was happy to find a replacement in the Voice Print, a recordable 5 x 7 photograph made by Qualex, a division of Kodak. Voice Print, which costs about $11 - $15, enables you to record a ten second message and uses the same I.S.D. chip that the Hallmark cards contain. Using the materials and procedures listed below, Ron adapted the Voice Print into an inexpensive communication system.

Materials Needed

- one VHS tape storage box
- 7.5" x 4" piece of styrofoam 1/2" thick
- one adhesive rubber foot
- wire cutters
- black electrical tape
- hacksaw
- one Voice Print
- Velcro strips

Procedures

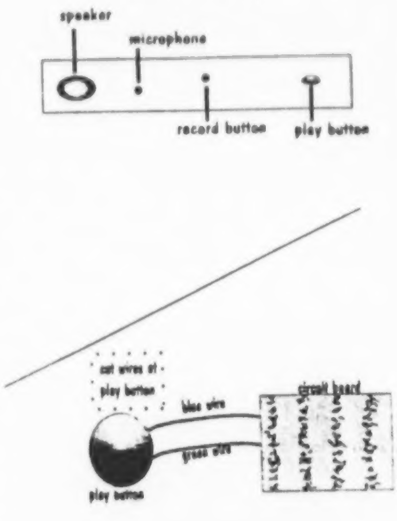
- Cut the tabs from the VHS tape storage box with the wire cutters so the lid will not stay closed. Then cut the styrofoam to fit the tape box.
- Measure 3" up from the base of the Voice Print and draw a line across the card. Cut along the line with the hacksaw. Discard the top half of the Voice Print.
- Place the Voice Print in the tape box on top of the 1/2" thick piece of styrofoam. Cut approximately eight 4" strips of electrical tape and use them to secure the Voice Print to the styrofoam and the VHS storage box. Do not tape over the speaker, microphone, record or play buttons at the base of the Voice Print.
- Close the VHS tape storage box. Mark where the play button is located. Open the lid and on the reverse side of the mark, place the adhesive rubber foot. When you close the tape box lid, the rubber foot should activate the play switch on the Voice Print.
- Secure the tape box lid with two pieces of electrical tape. Tape a picture or word on the lid as a visual prompt if desired.
- Pressing the tape box lid with a hard pressure can accidently activate the record button. To avoid this, place two small self-adhesive strips of velcro on each side of the record button. That way the lid will hit the velcro, not the record button.

When you purchase Voice Print, explain that you want the raw product, not the one with a picture laminated on it. Contact Vicki Farrow, Qualex, 2838 Market Street, St. Louis, MO 63103; 314/652-1300, for more information about Voice Print.

All Electronics Corporation sells rubber feet (Cat #RF-716) in a package of eight for $1.00. The company also offers a nice mounting device for Voice Print. The Auto Windshield Mounting Bracket (Cat #RM-1), a 3' x 3" bracket secured by three suction cups and a velcro pad that covers the entire surface of the bracket, sells for $1.50.

Hallmark is offering its recordable cards at 50% off. Call 800-HALMARK for more information. Also, check with the managers at your local Hallmark stores to see if they have any damaged cards they cannot sell. Often they will sell at greatly reduced prices or give away the "guts" of these recordable cards when the cards themselves are bent or torn. (That's okay with us "techies" since we throw the outsides away anyway!!)

Voice Print Diagram



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Special Education Laws Available on Easy-to-Use CD-ROM

LRP Publications offers information about special education laws on CD-ROM which lets you retrieve cited material and search for key words and phrases using simple, pull-down menu bars. The CD-ROM includes the following publications:

Individuals with Disabilities Education Law Report (all cases decided after January 1985, as well as selected prior important decisions)

Special Education Law and Litigation Treatise

Early Childhood Law and Policy Reporter (devoted to legal rights of infants, toddlers, and preschoolers with special needs)

Laws Affecting Children with Special Needs

Legal Rights of Persons with Disabilities: An Analysis of Federal Law (complete ADA coverage and comprehensive analysis of the issues)

For more information, call LRC at 800/341-7874, ext. 275, or fax 215/784-9639.

World Wide Web Addresses: Topics of Interest to Children

Kids Web:
http://www.infomall.org/kidsweb

Welcome to the Planets:
http://stardust.jpl.nasa.gov/planets

Lego Home Page:
http://legowww.homepages.com/

Kids Corner:
http://www.ot.com/kids

KidsCom:
http://www.spectracom.com/kidscom

Calendar of Conferences

December 7-10, 1995: 1995 ASHA Convention in Orlando, FL. Call 301/897-7348.

January 11-13, 1996: 13th Annual International TAM Conference in Austin, TX. Contact Dave Edyburn, 414/229-4821.

January 25-26, 1996: 5th Symposium on Literacy and Developmental Disabilities in Research Triangle Park, NC. Contact Stephanie Whitmore, 919/966-7486 or fax 919/966-3864.

February 8-9, 1996: Beyond the Barriers-Inclusion Works! in Houston, TX. Call 800/235-0390.

February 15-16, 1996: Strategies for Building Supports for All, 1996 Illinois TASH Conference in Oak Brook, IL. Contact 708/584-0970.

February 15-17, 1996: Florida Assistive Technology Impact Conference in Orlando, FL. Contact Jeffrey Fitterman, 813/872-5281.

February 16-17, 1996: 3rd Annual Wisconsin Technology Access Conference in Milwaukee, WI. Contact Jan Baudo, 414/438-3491.

March 4-6, 1996: 13th Annual Midwest Education and Technology Conference in St. Louis, MO. Contact Educational Technology/RCET Division, 1460 Craig Road, St. Louis, MO 63146.

March 7-9, 1996: 26th Annual Mid-South Conference on Communicative Disorders in Memphis, TN. Contact 901/678-5800.

March 14-15, 1996: *ACTT VII Early Childhood and Technology Conference in Macomb, IL. Contact 309/298-1634.*

March 17-20, 1996: 13th International Conference on Technology and Education in New Orleans, LA. Call 817/534-1220 or fax 817/534-0096.

March 20-23, 1996: Technology & Persons with Disabilities in Los Angeles, CA. Contact Center on Disabilities, 818/885-2578.

March 28-30, 1996: 37th Annual Conference of the California Transcribers and Educators of the Visually Handicapped in San Diego, CA. Contact 916/445-1290.

April 29-May 3, 1996: The Changing Face of Developmental Disabilities: Challenges and Opportunities in Service Delivery, Policy, and Research in New York, NY. Contact 212/563-7474.

April 17-20, 1996: Children...The Heart of the Matter, 1996 Midwest AEYC Conference in Lincoln, NE. Contact Linda Meyers, Nebraska AEYC, Box 94987, Linclon, NE 68509-4987.

June 7-12, 1996: Exploring New Horizons...Pioneering the 21st Century, RESNA '96 Conference in Salt Lake City, UT. Contact RESNA, 703/524-6686.

June 17-22, 1996: World Conference on Educational Multimedia and Hypermedia in Boston, MA. Contact Association for the Advancement of Computing in Education; 804/973-3987.

Switch Latch Keeps Going

Normally, a switch turns a device on only as long as the switch is being pressed. If switch pressure is released, the device turns off. If that response is most appropriate for a child, everyone is happy. But what if the child wants to listen to music or turn on a toy for more than a few seconds?

TASH, Inc. provides a new "twist" to switches with its Switch Latch. Switch Latch requires two presses. The first turns the device on. The device stays on until the switch is pressed a second time to turn it off.

Switch Latch also has jacks so you can plug in two single switches, one to act as an "on" switch, the other as the "off." Switch Latch is priced at $150. Call TASH at 800/463-5685.

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